

Special year 'round conditioning section
Three schools: serve three different needs

Do we have the wisdom?

wisconsin architect

january/1965



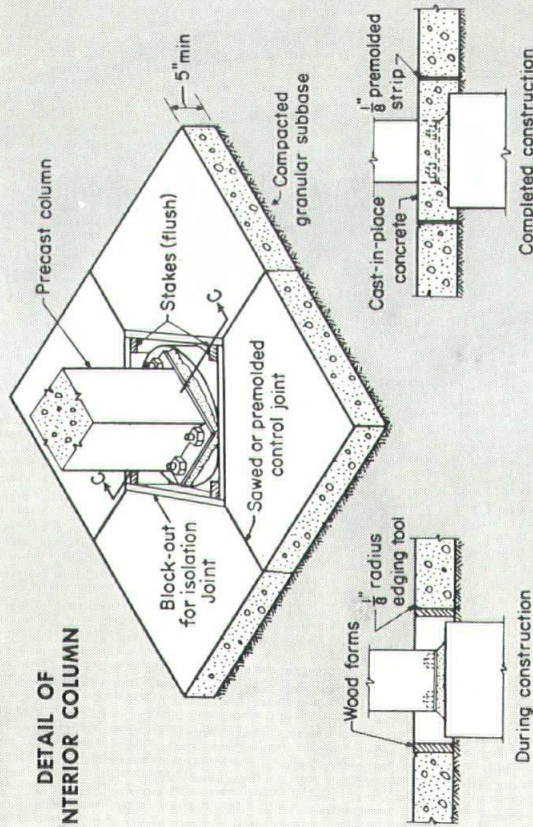
No. 1 concrete floor joints

a.i.a. file: 4-a

Prepared as a service to architects by Portland Cement Association

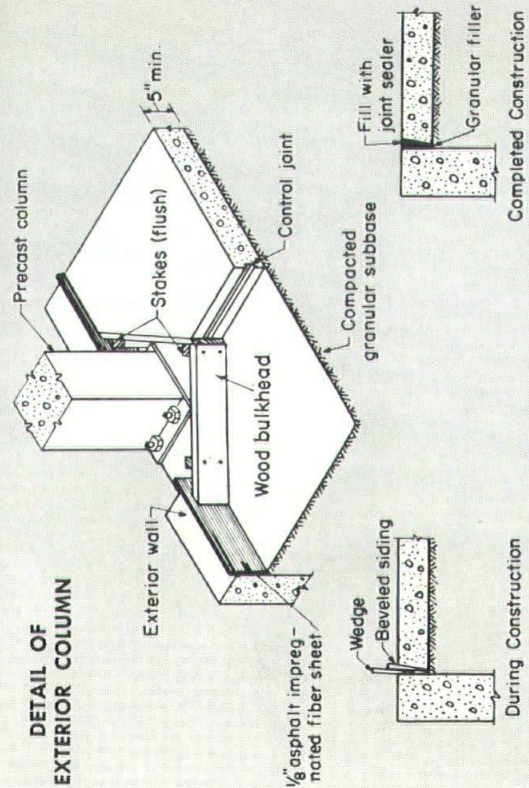
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DETAIL OF INTERIOR COLUMN



SECTION C-C SHOWING ISOLATION JOINTS

DETAIL OF EXTERIOR COLUMN



ALTERNATE WALL ISOLATION JOINT

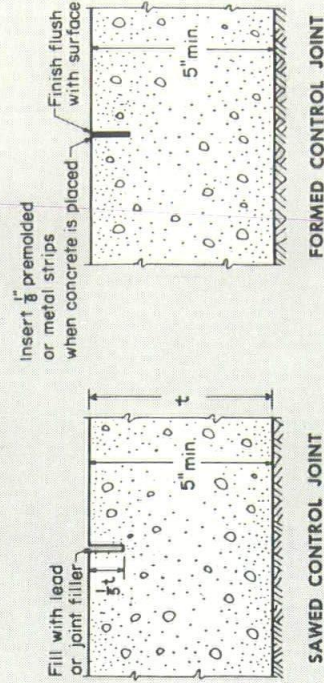
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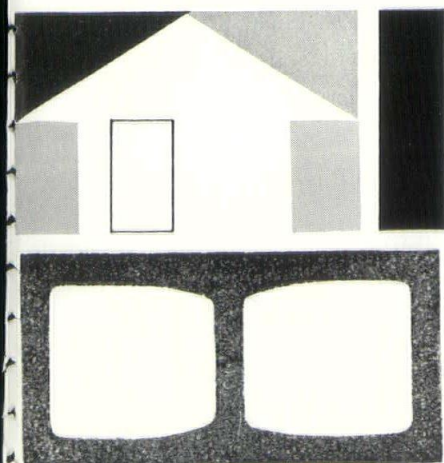
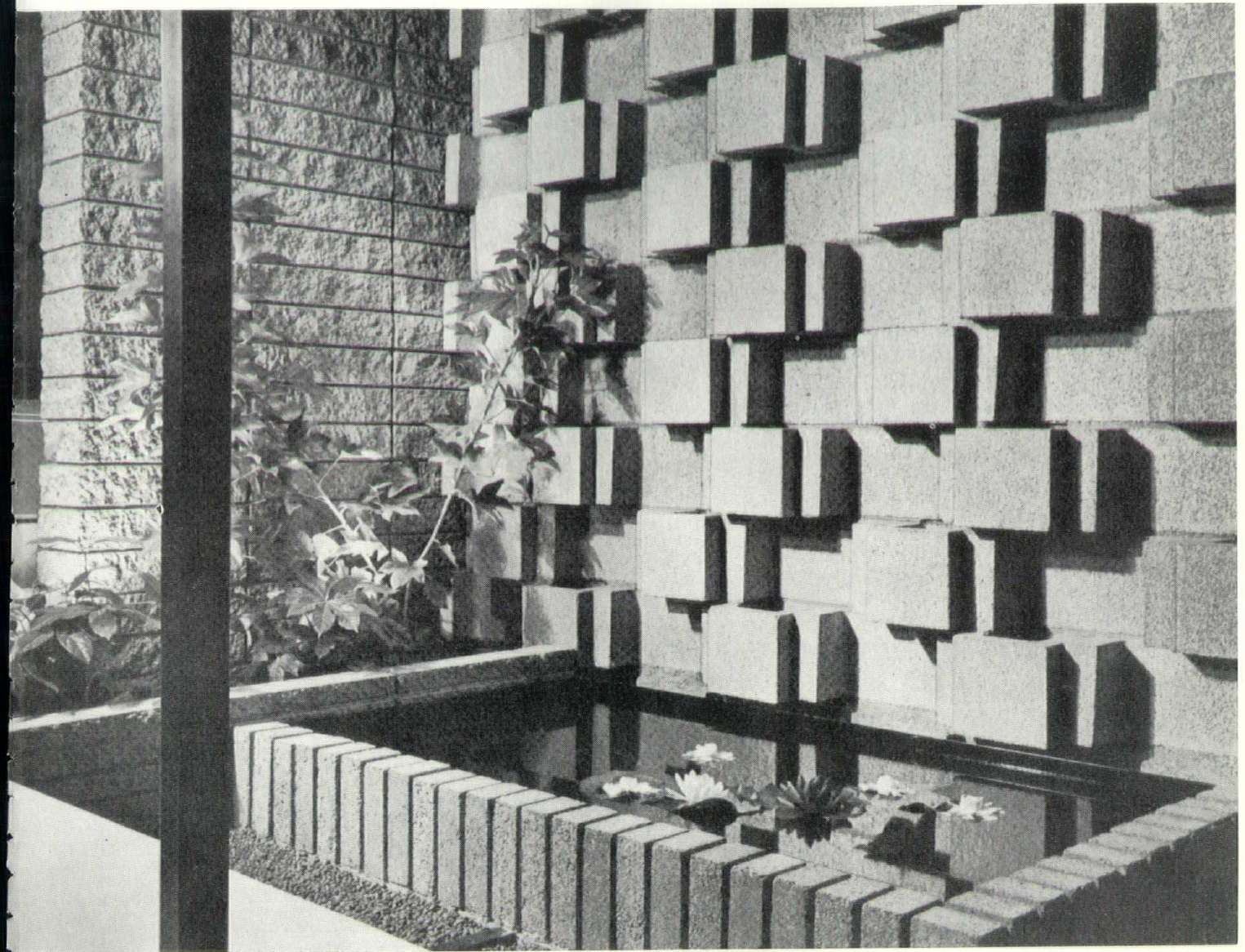
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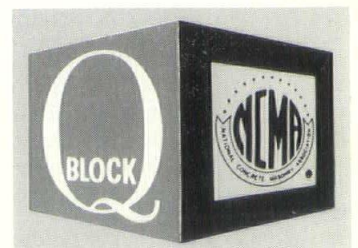
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Discussing the benefits of electric heating at the new Menomonee Falls Specialties Building are Richard W. Scheife (left), architect, and Dr. Jack R. Hoffman, of the clinic.

One of the latest electric heating and air conditioning installations in the Greater Milwaukee area has been completed and is now in full operation at the new Medical Specialties Building in Menomonee Falls. Dr. Jack R. Hoffman, of the clinic, reports complete satisfaction with this most modern system of temperature control.

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Volume 33, No. 1

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notes of the month

Architectural Competition for the proposed new University of California Arts Center in Berkeley, open to any architect resident and licensed to practice in any of the United States, black and white drawings only will be required in the Preliminary Stage. Registration deadline: January 30, 1965. Registration forms available at: Wisconsin Chapter, AIA, 3902 N. Lovers Lane Rd., Milwaukee, Wis. 53222 or, Eldridge T. Spencer, FAIA, Professional Adviser for the University Arts Center Competition, 251 Kearny Street, San Francisco, Calif. 94108.

Honor Awards Program, Wisconsin Chapter, AIA. Closing date for entry blanks and fees: February 8, 1965, for actual entries, February 19, 1965.

Women's Architectural League sponsors "A Night Out of This World" costume ball to benefit Wisconsin Architects Foundation on Saturday, February 27, at the Coach House Motor Inn, Milwaukee. Admission: \$15 per couple. Reservations: Mrs. Alexander, 7706 N. 49th Street, Milwaukee, phone 354-8847.

Wisconsin Chapter, AIA Convention Dates: May 4, 5 and 6. Theme: The Illusion of Space. Place: Lake Lawn Lodge, Delavan.

editorial

By now, most of our readers must know that we, the Wisconsin Chapter of The American Institute of Architects, have taken over the publication of "our" magazine, the WISCONSIN ARCHITECT.

Not since architect Leigh Hunt gave up publication of the magazine about 15 years ago had the architects, either individually or as a group, given a whisp of thought or interest to the WISCONSIN ARCHITECT other than the sponsoring of the use of its name by private commercial publishers. Those who published it from time to time sought little cooperation from the professional architect.

In October of last year, when the publication crisis arose, the Executive Committee made a bold decision that can be a turning point for the architects of Wisconsin.

Under the direct guidance of our own editorial committee of practicing architects, these pages can become the "voice" of the architects of the State and say with enthusiasm and conviction what it should have been saying during the past years. The WISCONSIN ARCHITECT can now echo the aims, desires, ambitions and hopes of the professional architect in Wisconsin and can bring to the public directly the true essence of the art in architecture.

Wisconsin is the fifteenth largest State in the Union, the thirtieth area to achieve statehood and the twenty-first most wealthy. Our University was founded in 1848 — and there are now fifty-four accredited schools of architecture in the United States — and yet in all this time, with all this wealth, the lack of an architectural school in the State and its automatic effects upon this Community of the State, is the single greatest deterrent to the existence of a more favorable architectural climate.

It is not alone of value that a school turns out graduate architects, but of most value is the critical examination of produced architectural work, lectures open to the public and read by the public, architectural research, exciting and imaginative student and faculty projects. All of these items — so necessary for a better understanding of architecture by the public — have, in Wisconsin, unfortunately been missing. And this magazine, a most wonderful chance to assist in the understanding of architecture, has in the past woefully neglected this opportunity.

While the University of Wisconsin is preparing the proposed new Department of Environmental Design which will include, as one option, a major in architecture, we trust, that together in cooperation and collaboration with the Department of Environmental Design, a new climate for the understanding and practice of architecture in Wisconsin will be nurtured at a pace that will bring us abreast of those communities whose cultures have long ago recognized the necessity and satisfaction of good design in every aspect of our daily lives.

civic design?



Seven hundred and fifty-eight square feet of controversy are facing MacArthur Square from the building located at 730-732 S. 6th Street in Milwaukee.

This big loaf of bread would do honor to any of the currently "en vogue" pop artists in New York. (How about that thought, Mr. Derse?) The owner of the building on which the bread is served receives \$600 rent yearly, for it being there. The City of Milwaukee received \$15.16 for its initial permission to put it there. For an additional \$4.60 per year it permits the bread to remain there forever.

We venture the guess that it must have cost Derse Advertising Co. from \$2,000 to \$4,000 to produce the giant.

Some like it, some do not.

We asked ourselves, how is it going to blend in with the City's plans to spend \$1,100,000 for landscaping and development of the Civic Center?

If it is true what the grapevine tells us then the big loaf is coming down because it is too controversial.

If it does come down, the City, the Advertising Agency, or whoever else may be responsible for its removal, should be commended.



Do we have the wisdom?

by Clinton Mochon, A.I.A., A.I.P

The Art and Science of architecture began as man emerged from the natural shelter of the cave. From that time to the present day a certain group of men have been dedicated to improving man's physical environment. These men, responsible for designing the structures which have not only met man's basic needs but also have been great works of art, are the Architects.

It has been their professional responsibility to their fellow man to mold spaces and work with materials like a sculptor, to introduce color as used by the painter, and to design functional, three-dimensional works of art.

Each civilization has produced its own culture which today can be directly related and interpreted by its architecture, be it Egyptian, Greek, Roman or Gothic. This leads us into the question of our own times. We are living in an age of population explosions, outer space exploration, increased movement, faster transportation, improved communications, yet, are experiencing at every turn of the head chaos and ugliness in our country.

In cities throughout the United States anti-ugliness committees are being formed by architects and lay

persons to alert people and to make them aware of the ugliness that surrounds us, with intent of arousing a public demand and insistence on creating a sense of order and beauty in all the areas in which we live.

After a minimum of five years of college education, the young man in our country theoretically has been exposed to all of the elements which make for the foundation for the growth of an architect. These include the fields of art, structural design, mechanical design, sanitary design, landscape design, interior design, electrical design, business administration, economics, speech, drafting, writing, etc. After receiving this college preparation, he then must work for a minimum of three years in an architect's office to gain practical experience to prepare him for the State Architectural Registration exam which, upon completion, will allow him to practice as an independent professional architect.

It is at this time that the architect really becomes aware of the fact that he must be a successful coordinator in the Art and Science of architecture in order to guide the proper design of a man-made environment which should be an honest expression of the people and culture of our time.

Architecture today has become so complex that it can no longer be the work of one "master builder." The engineering intricacies alone of necessity involve specialists of many talents. The true responsibility of the architect today is to provide a related creative design concept that is artistic and functional. He must coordinate all of the areas of design which make a truly outstanding building or group of buildings. Today the architect must use products of industrial skill; he must research and experiment with materials and structures in order to find new and better ways of creating architecture long before actual buildings are built. Once the initial design concept has been achieved and if it is creative, it is usually the concept of one individual, not a committee (It has been said, "The Mona Lisa could not have been painted by a committee."), the architect then has to surround himself with a team of men who can work together with that common purpose, to create good architecture for man to enjoy, and live in, and to meet the functional requirements necessary for proper living in our society today, whether it is in the field of religion, education, recreation, commercial buildings, industrial, etc.

A common misconception is that architecture is the art of one building only. It has been said that architecture is every man-made structure between the earth and the sky and that it should be beautiful as well as functional. Architecture is created space, whether interior or exterior space. It is the relationship of a room to a building and a building to its surroundings and its surroundings to the community and the community to the city and the city to the region and the region to the country. Architecture is the relationship of buildings, one to the other and to the landscape. This relationship should make for a sense

of unity and order, delightfulness, and most of all contribute to the spirit of man. It should evoke an uplifting feeling, which in turn extends happiness and delight to the individual.

We recall the Greek cities and the medieval villages, the great Gothic cathedrals, cities like Paris, Rome and Venice and find proof of what architecture can do for man. The architecture and cities of the past have been molded by the physical, social and economic pressures of their time and culture. The Egyptian pyramids and tombs were mainly the result of a religious force. The Greek cities were founded and designed practically for reasons of defense, as were so many cities and villages which were built on mountain hillsides or islands, walled to enclose and protect and make secure the people who lived in that time. The great Gothic cathedral spires, which became dominant symbols, reflected the spirit, the thinking and direction of the population.

These are but few examples of the spirit contained and expressed in architecture. Turning to our cities of today, we can observe sprawling, unorganized, ugly examples of unsuccessful man-made environments. If our society today is the healthiest and wealthiest which has ever existed since the beginning of man, then it is time now for our people to turn to the educated professional person, trained and responsible for the organizing of man's physical environment, just as they turn to the doctor if ill, or to the lawyer if legal assistance is needed. A relatively small group of architects in the United States who are devoting their lives to improving man's environment must be given an opportunity to be heard and to express their thoughts and influence toward guiding the proper physical development of our communities. People who are experienc-



ing so much ugliness must not only hear out the architect but recognize and actively support his ability to guide and coordinate the expansion and growth of our environment.

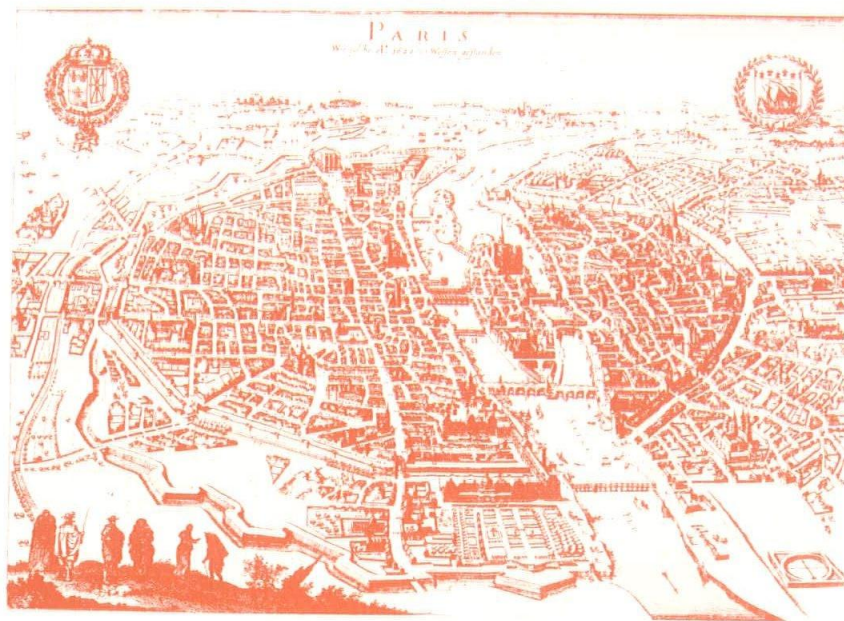
We can learn much by looking back into architectural history to observe the successful man-made spaces, interior and exterior. We must begin to appreciate the vital importance of zoning in our cities today. Zoning ordinances are formulated by Governmental agencies which, in most cases, are made up and approved by men who do not have the educational qualifications or vision to make legislation to set a pattern or give proper direction to an orderly growth to our community. Zoning of today must protect and preserve, as much as possible, existing values; but, on the other hand, a great deal of thought should be given to the overall plan and concept of the relationship of buildings to open space and green area, to architecture, art and landscaping. Landscaping should become the thread of unity throughout the city, relating and relieving the rigid architectural lines of our man-made structures.

It is the architect's responsibility to stimulate and educate and make people aware that their environment is not only ugly in most cases, but that it can become, with proper planning and guidance, an exciting and delightful physical environment, a true and honest reflection of a culture and society which should be great in every way. Now is the time.

Architects are small in number and their task is great. If the standards of education and particularly art education improve in our country, the architects shall be assisted by a generation of young people who are aware of beauty and the ingredients that create it. Architects need assistance in their efforts to inform the public and to arouse its demand for improved physical environment.

The architect himself knows that a building or group of buildings or direction in the planning of cities and communities can only be achieved through a common understanding, and the acceptance of sound new ideas and concepts which require imagination and innovation for breakthroughs which, in most cases, may be very controversial. We have to learn to respect the professional individual for his training and experience. As people should recognize the architect's responsibility, the architect himself has to recognize his obligation to respect his own responsibility for creative design. He must attempt to try, with his training and ability, to provide honest and exciting design concepts and coordinate and guide groups of people with a common understanding and objective to produce a truly successful environment. Let us hope that by now the highway engineer has had his day determining man's environment. It is time to raise our sights and standards and to think in terms of the spirit of man which we are trying to uplift by planning an exciting and delightful man-made environment reflecting our times and our people. It should be stated that it is possible to do this without spending any more money than we presently spend in building rows upon rows of ugliness surrounding us. A guided planned and zoned orderly growth can be more economical and provide a more secure economic base for investments of a people in a community.

Man is on earth for a short time. The buildings which surround him should enhance and delight and make his life more beautiful and full. A man's surroundings should give him a sense of fullness, stability, confidence and a love and appreciation for life. This is the architect's professional responsibility to create. He must listen and he must be heard if we are to achieve a cultural level to surround man with the most beautiful man-made environment for his own brief happiness.



Three schools: serve three different needs

Donald Hay, head of the industrial design department at the Layton School of Art, gives a critique of a chapel project begun by his industrial and interior design students in an architectural coordination class.



Layton School of Art

In no way is the Layton School of Art in Milwaukee a substitute for an architectural school in Wisconsin, but students in the industrial and interior design departments do plan buildings of many kinds — inside and out — as part of their curriculum. Their approach is non-mathematical and concerned mainly with aesthetics and function rather than with mechanics or engineering of structure.

Some graduates of the interior and industrial design courses go into architectural offices as full time workers. Others, who prefer to work as free lance designers or to join an ID firm, may be called upon by architects to do general planning or to serve as consultants on particular problems.

Examples of what can be done in combining ID with architectural work are the men of the industrial and interior design faculty at Layton, each of whom has worked, and still does, with architects, building engineers and developers. All are professionals active in their fields (true of teachers in every area at the Layton) in addition to carrying out their classroom duties.

Donald Hay and Allen Bushnell, who teach industrial design, both took their master's degrees in design at Cranbrook Academy of Art after their matriculations at Carnegie Institute of Technology and the University of Wisconsin, respectively. Each has worked sometime in his career in architects' offices and now together they maintain an ID firm in Milwaukee and,

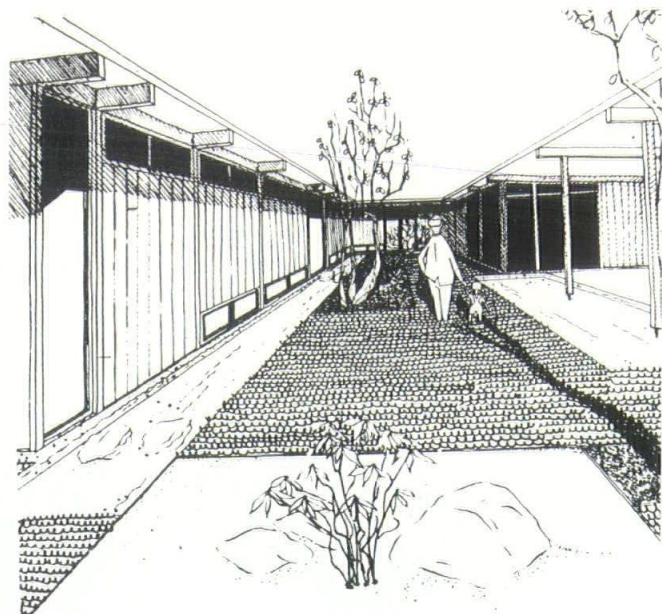
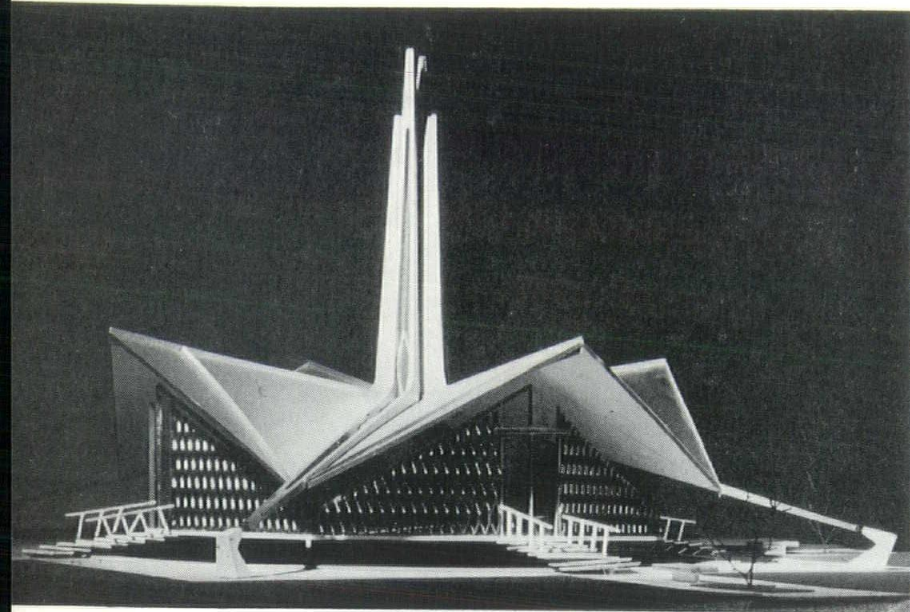
as one of their services, work often with local architects. The interior design instructors, Ronald Raetzman, a graduate of the Art Institute of Chicago, and Patrick McGriff, an alumnus of the University of Florida and Kendall School, Grand Rapids, Mich., also have served — and continue to — as consultants to architects and builders.

Industrial and interior design education is not as specialized as that for architecture, nor is it as long. The intention of the four-year ID program at Layton is to produce *designers* capable of analytical thinking and creative solutions, with the power to make aesthetic and efficient contributions to many aspects of our complex industrial society — in marketing, furniture, appliances, graphics, engineering, product planning, packaging, management, traffic control, development of new uses for old materials, production methods, discovery of new materials and ways to use them — and architecture, to name areas in which ID people are proving useful.

Hay, who heads the industrial design department, points out that industrial art is a new art born to meet the mass needs of a rapidly expanding *industrial* society. "The only kind of manufacturing we can afford today is a mass kind and this will become more and more evident, with housing included," he maintains. Here the industrial designer could be especially helpful to the architect, not only in developing better and more attractive prefabricated components and in find-

Model of a chapel for a college campus designed by Edward Lazzeroni for an architectural coordination course in the industrial and interior design department of the Layton School of Art. The roof and steeple are structural laminated aluminum and the curtain walls, pierced with colored glass windows, of masonry. The structure is poised over a pool. It was developed from an original folded paper design.

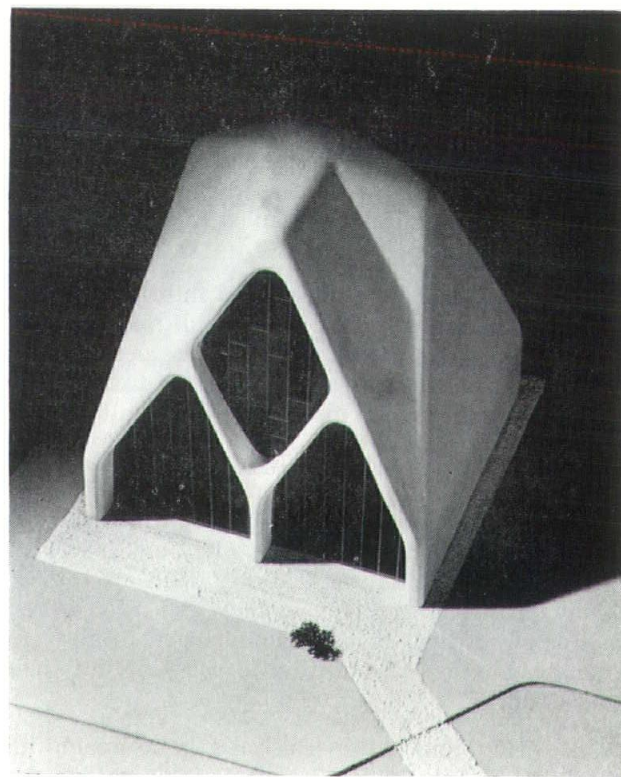
Interior view of the court designed along with a three-bedroom home, in the \$25,000 category, by Eileen Farschmin.



ing technical short cuts but also in educating the consumer to appreciate and demand aesthetic design as well as good function. Hay adds that the industrial designer is involved in planning for "mobile architecture," that of the automobile and the airplane.

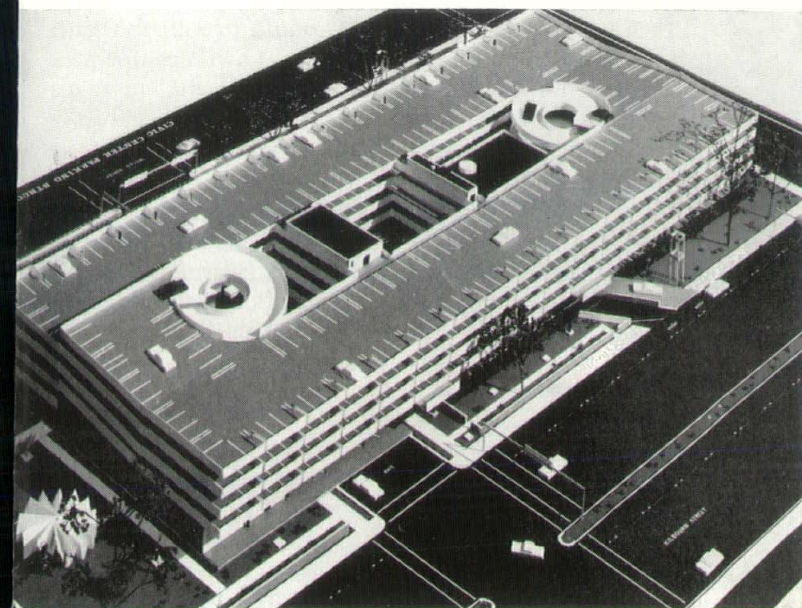
All students at Layton (whether in ID, the fine arts, illustration or advertising design) undergo a foundations program during their first year which includes drawing, design, composition and survey of art history. Thereafter, they continue study of these but begin to concentrate increasingly on their major interest. The classes of the industrial and interior design students are identical through the second and third years. They must take instruction in form, basic design procedures, graphic skills, experimental workshops, aesthetics, industrial art I, furniture design and construction, history of art I and II, and architectural coordination. In their final year they concentrate on either industrial or interior design, working at these full time except for several hours during which they study business procedures.

Assignments in the architectural coordination class have included the planning of chapels, private homes, office buildings, service stations, a book store, a barn (which was constructed on the grounds of the school), parking structures, and many more. The last mentioned were done last spring and three were pictured in a story by David Link in *The Milwaukee Sentinel*. Recently, the national magazine *Parking*, published



Another chapel development from a folded paper design which offered immediate concepts of volume, line and the interplay of planes. This model, by Wayne Aderman, was planned to be constructed of formed concrete poured in place.

An off-street parking structure for Milwaukee's civic center designed by Robert Lewcock. The inflow and outflow of auto traffic is arranged so that it is completely separated from pedestrian activities. It includes a small band shell, a central plaza and a group of stores.



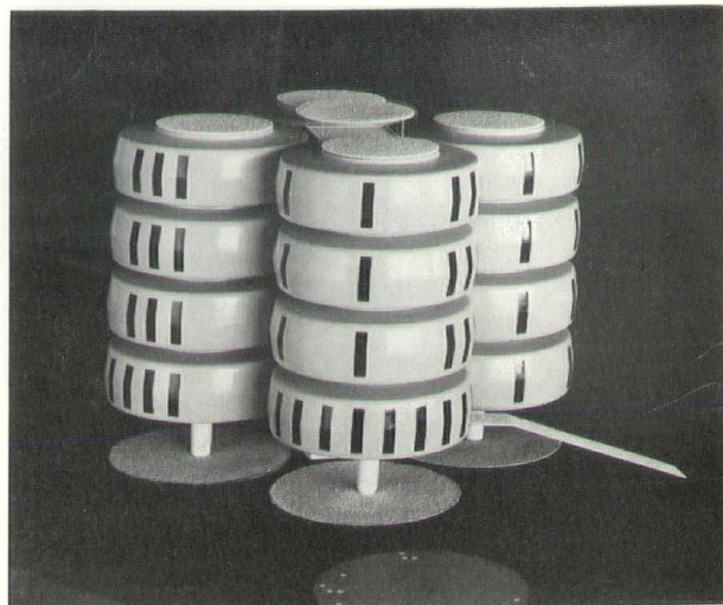
in Washington, D. C., asked for photographs and an article on the structures.

The parking structure assignment, given by Raetzman, who is head of interior design, was based on requirements laid down in the City of Milwaukee's preliminary plans for off-street parking in the projected civic center. The designs were to have no official standing, of course, but to serve as realistic practice. Raetzman invited to his classroom a battery of city engineers, traffic experts and representatives of the cement industry. These men spent hours discussing technical problems and requirements with the students. Results were three quite successful structures. Robert Hartmann created a twin disc design; Robert Lewcock, a rectangular design about 50 feet high with two ramps for directional traffic; and Thomas Rebeck, a building eight stories high.

Students in an earlier architectural coordination class were assigned, by Hay, the design of an interdenominational chapel for a midwestern university campus which would seat 350 and be related intimately to the terrain. They were to begin with folded paper forms which would give them three-dimensional concepts of volume, line and interplay of forms. It is not hard to envision the paper beginnings of a most arresting model, planned to be raised over a pool of water, by Edward Lazzaroni. The eight-faceted aluminum roof is hung from supports buttressed at four points. The supports ingeniously become part of the steeple located above the center of the church.

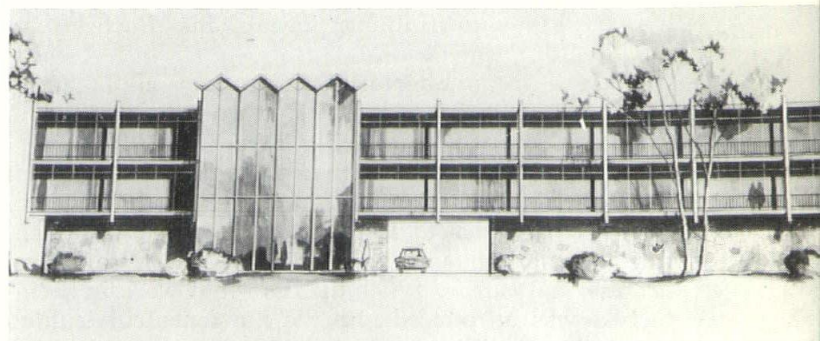
The "art" emphasis in the Layton's curriculum is evident in the beauty of the students' designs. But the practical side of the designer's career is not neg-

This model for a group of towers, done by Wayne Wagner at the Layton School of Art, as his thesis project in industrial design, predates by several years the Marina in Chicago.



lected, as has been indicated earlier. A three-credit course in business procedures is a finale during the fourth year. Hay was quoted recently in the magazine *Industrial Design*:

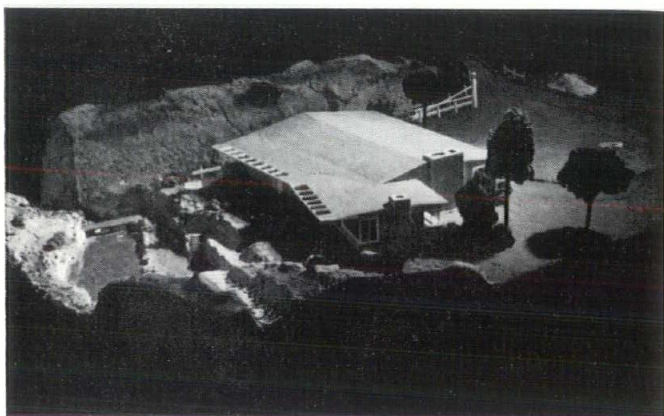
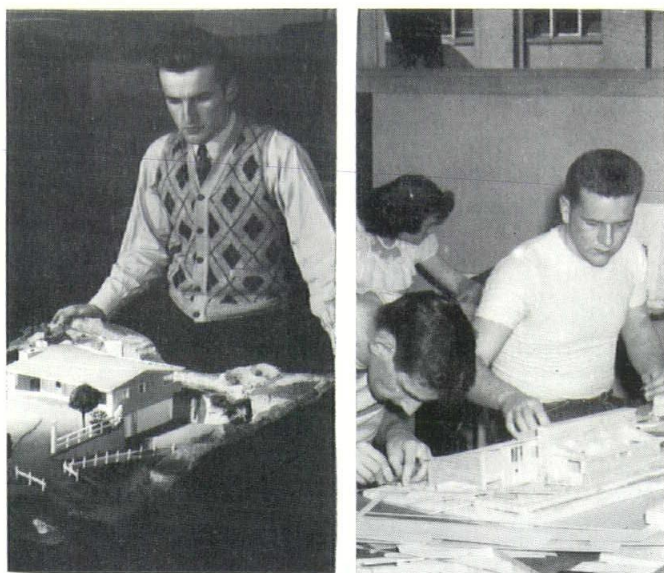
"Industrial design, indeed an art, is also a business. Unlike other artistic endeavors, success and recognition depend exclusively and directly on the extent to which artistic principles are related to the needs of society and industry. Although every working designer knows this is true, most students are artistically motivated, however naively, and generally unaware of the nature of challenges they will meet in business. . . . Our purpose is to increase artistic knowledge and sensibility, which results in originality and self-expression, and at the same time to keep the student aware of the more utilitarian aspects of his profession."



Design for an office building in concrete, with curtain walls of aluminum and glass, designed by Jerome Krause as a classroom assignment at the Layton School of Art.

Preparatory architectural education on the college level as offered at Lawrence University in Appleton

Charles M. Brooks, Jr., Chairman, Dept. of Art



Although it is not possible at Lawrence to major in architecture as such, a student may major in art and take the maximum number of courses offered in architecture while earning his Bachelor of Arts degree. These courses appear on his transcript should he apply, on graduation, for admission to a professional school; and in most cases credit is allowed which speeds up his postgraduate training toward his Bachelor of Architecture degree.

Courses in architectural design and architectural history have been offered at Lawrence since 1946. Such courses are considered as being within the liberal arts tradition, and they provide the interested undergraduate student an opportunity to choose electives in the field in order to test his competence in and enthusiasm for an area which might concern a future professional career. Since the date that work in architecture was introduced into the Lawrence curriculum, more than twenty graduates have gone on to professional schools including Yale University, the Universities of Illinois, Michigan, Minnesota, Texas, California and Washington. One 1963 graduate of Lawrence is presently at the University of Minnesota

thanks to an out-of-state tuition grant provided by the Wisconsin Architects Foundation.

It is possible for the undergraduate to take four full term courses in architectural design. Lawrence operates on a three term academic year, and the student takes three courses in each term. Thus a total of thirty-six courses must be successfully completed in four years in order to graduate. These are credited toward graduation the same as any other courses at Lawrence, and they are available in a progressive sequence.

Two courses cover what is called Beginning Architectural Design and involve the student in residential projects only. The student writes his own program for the house and, on approval of this by the instructor, he proceeds with his project in several phases. The plan, first studied loosely, is ultimately presented in a dimensioned blue-print. From it line drawings of the elevations are developed, revised and perfected. Blackboard lectures on perspective, shades and shadows and lettering supplement the work in the drafting room. The embryo architect then advances to delineating his house in a descriptive full-color presentation, using any medium of his choice, including water-color, tempera, colored pencil, etc. Lastly, working with the blue-prints and renderings he constructs a scale model, landscapes it, and thus concludes sixty class meetings.

In two term courses in Advanced Architectural Design he may undertake a more complex project, carrying it through steps similar to those described above. Multiple dwelling units, country clubs, churches, schools, civic centers, etc., have been chosen here, and such major projects are often supplemented by extra eight hour sketch problems. Bringing together a portfolio of finished work is encouraged for future school or job reference.

It should be emphasized that architectural engineering, specifications, etc., are not included in the offerings, the Lawrence view being that these belong in the later professional training. However, what Lawrence does offer is a chance to test one's skills in drafting and rendering as well as one's imagination in design, to the end that an undergraduate's creative mainspring may be uncoiled.

The art department at Lawrence believes, with Vitruvius, that "knowledge is the child of practice and theory." Any potential architect is urged to take courses in the history of architecture. Four terms of these are also offered, including Medieval, Renaissance, Nineteenth Century, and Twentieth Century. These cover such subject matter as Early Christian, Byzantine, Romanesque, Gothic, the Decline of Gothic and Rebirth of Classicism, the Historic American "styles," the work of H. H. Richardson and of Louis Sullivan, Frank Lloyd Wright and Taliesin, Walter Gropius and the Bauhaus, as well as talents from the Saarinens to Nervi and Solari, and from Stone to Pei. All the lectures are illustrated with both slides and blackboard sketching, a notebook with glossary of technical terms is required, and outside reading is assigned.

Milwaukee Institute of Technology

The Milwaukee Institute of Technology was organized to provide day and evening educational programs beyond high school. The objectives of the institute are to provide programs of general and technical courses at college level, properly balanced and intergraded to prepare students for entry into employment as technicians and to give them understanding, appreciation and skills essential to their chosen field.

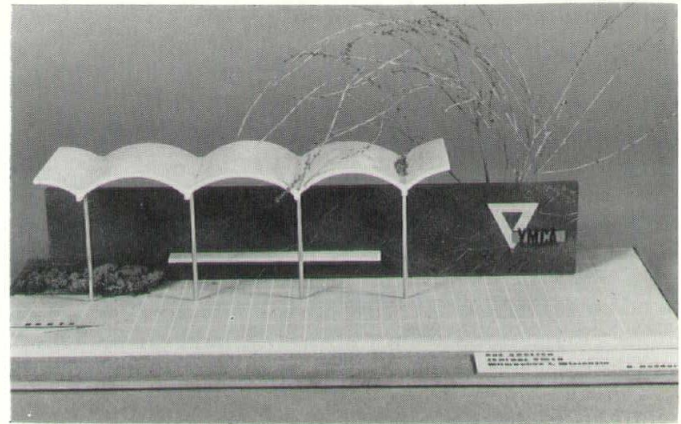
Students may elect single courses or complete curriculums to satisfy their specific needs. In general, these curriculums are designed as terminal type programs which will qualify the students for positions as technicians or draftsmen.

However, many of the students elect to continue their education in another school and work toward the baccalaureate degree. Those students who elect to do this have found that a great many of the credits have been transferrable to accredited architectural schools out of state as the Milwaukee Institute of Technology is accredited by the North Central Association of colleges and secondary schools.

The organized programs cover a period of two years of full-time attendance in the day school or six years in the evening school. Completion of the required courses as indicated on the specific curriculum will qualify the student to receive an associate in applied science degree.

In the building construction field there is a degree program offered in Structural Technology. This program is structured to provide sound, basic training in the design and construction of buildings and highways. Four majors are offered: Architectural Drafting, Construction, Highway Engineering Aide, and Structural Drafting. The first year of the work is the same for all four majors, after which specialization begins. The Architectural Drafting major provides specialized training in the field of Architectural Drafting and Design. Following is the two-year day school curriculum which must be completed by candidates for a degree in Associate and Applied Science in Structural Technology:

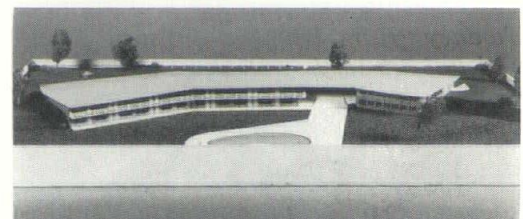
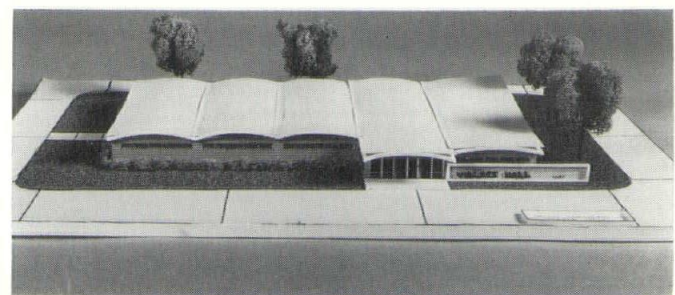
DAY PROGRAM			CREDITS	
FIRST YEAR			1st Sem.	2nd Sem.
STR T	111	Architectural Theory and Drawing 1....	3	
STR T	121	Construction 1.....	4	
ENG	151	Communication Skills 1.....	3	
MATH	151	Technical Mathematics 1.....	4	
PHY Ed	101	Physical Education.....	1	
Soc Sci	151	Psychology of Human Relations.....	3	
Soc Sci	100	Orientation.....	0	
STR T	112	Architectural Theory and Drawing 2.....		3
STR T	122	Construction 2.....		2
STR T	128	Building Codes.....		2
ENG	152	Communication Skills 2.....		3
MATH	152	Technical Mathematics 2.....		4
NAT Sci	151	Technical Science 1.....		4
			18	18
Architectural Drafting Major				
SECOND YEAR				
STR T	113	Architectural Theory and Drawing 3.....	3	
STR T	118	Architectural Rendering.....	2	
STR T	123	Construction 3.....	2	
STR T	130	Quantity Survey.....	2	
STR T	140	Statics and Strength of Materials.....	4	
STR T	155	Surveying.....	2	
Soc Sci	153	American Institutions.....	3	
STR T	114	Architectural Theory and Drawing 4.....		3
STR T	124	Construction 4.....		2
STR T	132	Building Estimating.....		3
STR T	135	Contracts and Specifications.....		2
STR T	142	Reinforced Concrete Design.....		3
STR T	144	Structural Design.....		3
Soc Sci	155	Business and Industrial Relations.....		3
			18	19



Entrance requirements for the structural technology program are high school graduation plus one year of algebra and one year of geometry.

In September, 1964, 94 freshmen enrolled in the first year program of structural technology and 40 in the second year. Of these 40 students, 16 have elected the Architectural Drafting Major. Since 1953, when this program was inaugurated, graduates of this program have had a record of 100% placement for those graduates who elected to terminate their education at this point and seek employment. There have been other students who have shown interest and aptitude in continuing their training with the ultimate objective of becoming registered architects who have gone on to such colleges as the University of Minnesota, the University of Illinois, and others to complete their education in this field.

Members of the technical faculty are exceptionally well qualified. Most of them have been selected from the construction industry and are specialists in their specific field. A registered architect, Mr. Hall Smith, who was employed last September to teach the architectural theory and drawing courses, is a graduate of Miami University and holds licenses in Ohio and Illinois. Before joining our staff, he worked for seven years for the firm, Skidmore, Owings, and Merrill in Chicago.



gibson byrd

by Margaret Fish

Architecture during most of man's recorded history has been "mistress of the arts" — a unifying structural form which literally embodied painting, sculpture and pure decoration and expressed most fully the spirit of its age. But architecture is not that nurturing "mistress" today. Perhaps some of the answer to *why not* may be found by listening to the artists whose works today, more often than not, must stand on their own isolated worth.

Madison artist D. Gibson Byrd, in an interview with F. T. Nugent, architect of Madison, said he believes architecture has lost its artistic flavor because the architect has become a business man more intent upon making technological than aesthetic gains.

Mr. Nugent's discussion with artist Byrd was premised upon finding any relationships, if any, that contemporary painting has with architecture. Mr. Byrd, as it turned out, saw very little true or meaningful connection and felt that a general mistrust of painters by architects seemed to exist, dating perhaps from the early 1930's when anonymous representational WPA sponsored art was liberally applied to a great many public buildings. His feeling was that architects seem to resent the penetration of their structural spaces by artists.

When asked if he thought a general awareness of the value of art within architecture had been stimulated by the practice of institutions, such as banks, libraries, schools, etc., in setting aside areas for the regular ex-

hibition of paintings, Mr. Byrd replied that this is merely a superficial trend and could not be considered an *integration* of art in architecture. He added that many buildings, especially the larger monumental designs, very much need humanizing elements that could be integrated through planned-for paintings or murals.

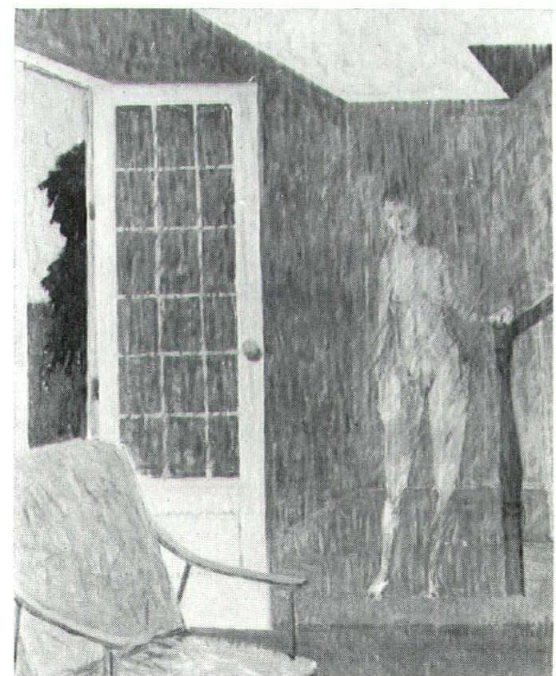
Mr. Byrd is a humanizer in *his* paintings, devoted as they are to mankind's form, not only the physical shape but also the spiritual and psychological forces that make life a wondrously mysterious ordeal. In the years before he came to the University of Wisconsin, in 1955, he painted abstractions and works with "cubist overtones." But in the past decade, he has created a visual world in which human figures are involved in conflict, flight, estrangement, isolation, bafflement and loss — on personal and lonely levels, not cosmic ones.

He knows the necessity for general color and mood in evolving paintings that invade — whether pleasantly or not — the viewer's psyche and remain in his heart and mind. His palette is relatively limited in each painting but not the same in each, every one done in appropriate combinations. His brush work often is reminiscent of that by the later post-impressionists, and his projection of all-pervading personal mood relates him to their "intimism."

A recently exhibited oil (the medium in which he paints exclusively today) is "Wild Blue Yonder Plus



Twenty years later . . . "The Wild Blue Yonder," a visual memory by D. Gibson Byrd.



"Interior with Nude" by Byrd, portraying a ghostly figure after she has descended the staircase.

Twenty," seen in the November-December Strelnin Exhibit at the Jewish Community Center, Milwaukee. In this he offers a remote civilian figure in the background, who evidently belongs to today, gazing toward a group of Air Force men, most of them ghostly, posed dashing in the foreground before a World War II bomber. The dates 1946 and 1944 are painted into the picture, facing the inhabitants, and so they are upside down to the outside viewer, and the title phrase of the song is stenciled into a brilliant blue sky. The past, then, is in the foreground and the present, in the figure of the man who is remembering 1944, is relegated to the distant back. The juxtaposition is symbolic and has an hallucinatory effect, and the khaki and blue tones are memorable.

Mr. Byrd is the rare painter who can suggest the presence of a ghost, as he does in "Interior with Nude." The door is wide open in this scene — of a nude who has just descended a staircase — and space passes through it into infinity. Architects particularly ought to appreciate the strong structure of this painting, the design firm although the brush work creates an aura of flux.

In "Rout," the scene is just that, of a man screaming and running away from a group of sculptured figures sunk into the middle ground of the painting. Huge bats and blowing newspapers contribute to the ominous character of the scene. Here, typically, the artist creates vast empty space which contributes to the distressing effect.

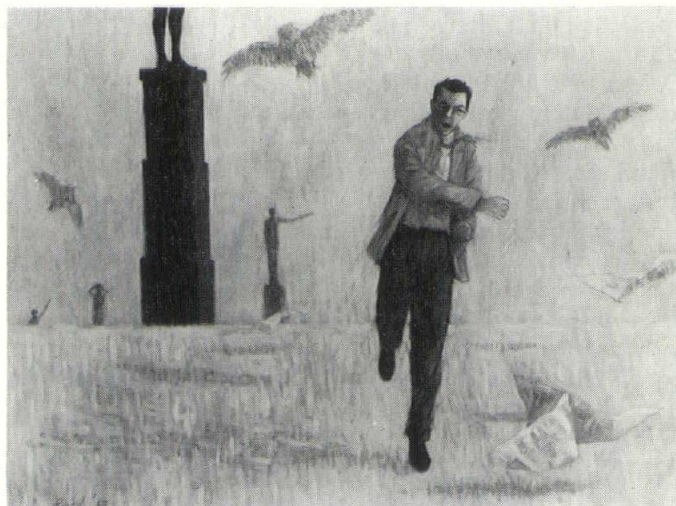
The artist does not systematize his paintings into a school. After painting abstractly, he re-examined his intentions and concluded he could say more of what he felt in figurative painting. Byrd believes that categorizing art into schools is done more by laymen and dealers than by the artists themselves who are highly individual. Although he himself paints figuratively, he said to Mr. Nugent that so far as other artists' work is concerned he has a greater appreciation for the non-figurative. Queried about "pop art," he said it is a true art form, deeply engaged with society, by which strong statements can be made and that from the current trends, some great artists of major stature will emerge.

He named Larry Rivers as among the more sensitive of the "pop artists." If for no other reason, pop art is valuable because it has given new perspective to abstract expressionism, he said, because the movement was becoming an academic formula. It is a relief from the accepted art forms of the past ten to twenty years and also is given a broader base to contemporary art expression, he added.

Mr. Byrd exhibited frequently in his native Oklahoma before coming to the art faculty in Madison where he teaches drawing, painting and art education. He has shown his paintings in museums and galleries around the country as well as throughout Wisconsin. His most recent award was in the Madison Art Association 1964 Exhibition. His bachelor and master's degrees are from the University of Tulsa and the State University of Iowa, respectively. He is married and father of two children.



D. Gibson Byrd in his classroom at the University of Wisconsin in Madison.



"Rout," an oil by D. Gibson Byrd, enigmatic in its projection of lonely terror.

Wisconsin Architects Foundation

Phase IV

Through arrangement made by Roger M. Herbst, President of Wisconsin Architects Foundation, State Architects Allen J. Strang of Madison; Julius Sandstedt, Oshkosh, and Byron C. Bloomfield, Madison, met with Governor-Elect Warren P. Knowles in Madison on December 15. Their purpose was to acquaint the future Governor with the expressed interest of the Wisconsin Architects in the University of Wisconsin's role in providing a much needed curriculum in architecture. The presentation was stimulated by a Resolution on behalf of Wisconsin Architects Foundation and the State A.I.A. Education Committee endorsing a proposal by the University of Wisconsin to establish a degree program in environmental design. (See November issue.) The current biennium request in new program development by the University includes the initial step in this direction.

Students

The Foundation's important function of awarding tuition grants occurs each year prior to the beginning of the academic year. The nine Directors meet late in August to decide which Wisconsin architectural students are eligible for financial assistance. The students considered are those whose tuition aid is to be continued, based on previous performance and eligibility, and an increasing number of new applications. The applications, together with recommendations of the Deans of the accredited schools attended, are carefully screened, and only the most needy with recognized potential are approved. The final number of students is limited also by Foundation funds available. While continuation of aid for the second semester becomes almost automatic, the Directors meet again late in January and examine reports from the Deans on the first semester's performance and grade point average.

When the Foundation's Directors meet early in the new year, they will be confronted with several more applications from seemingly

deserving students. As an example: A married student in his final year is in such tough financial straits that he is considering dropping out of school to find employment, with the hope of getting his degree later. Would you turn him down?

Finances

It is contributions from organizations associated with the architectural profession which are growing in importance to the Foundation's increasing need for funds. On December 1 the Foundation sent out an appeal for contributions from these organizations. Prior to publications deadline for this issue, contributions had been received from the following, touched off so handsomely by the Best Block Company's annual contribution reported in the December issue.

Super Sky Products, Inc., responsible for the dome skylight work at Mitchell Park Conservatory which is receiving widespread attention.

Edward T. VerHalen, Inc., manufacturers' representatives.

D. G. Beyer, Inc., prominent general contracting firm.

Additional publicity was furnished gratis by *Daily Reporter* and *Western Builder*.

Further contributions will be reported in the February, 1965, issue.

Report

The Executive Committee met on November 13, 1964, at Robbin's Restaurant in Oshkosh with the following members present: Leonard H. Reinke, Emil W. Korenic, James J. Angus, Lawrence E. Bray, Paul H. Graven, Roger M. Herbst, Maynard W. Meyer, Robert P. Potter, Al J. Seitz, Norman Sommers, Allen J. Strang and Robert Yarbro.

All the Chapter Sections have held elections of officers or have received nominations from their respective Nominating Committees. New Officers will begin their terms on January 1, 1965.

The report of the Professional Practice Committee was accepted and approved. The complete summary of liability and responsibility will be referred to counsel prior to distribution to the membership.

Representatives from the Wisconsin Chapter had attended a workshop sponsored by the Governor's Commission on Aging. Several resolutions affecting Architecture and the construction industry were adopted at this session. A complete report will be received later.

A progress report was made on the WISCONSIN ARCHITECT. The first issue, published by the Chapter, was available at this meeting.

Consideration of sponsorship of the North Central States Region Press Seminar was delayed until the next meeting.

The Primary Officers' Nominating Committee reported on its candidates for the Chapter Offices: Mark A. Pfaller for president, Joseph Durrant for vice-president, and Emil W. Korenic for secretary-treasurer. A unanimous ballot was cast for the slate as proposed.

The meeting was adjourned at 3:40 p.m.

* * * *

The Executive Committee of the Wisconsin Chapter, A.I.A., met on December 11, 1964, at the Wisconsin Club in Milwaukee with the following members present: Leonard H. Reinke, Mark A. Pfaller, Emil W. Korenic, James J. Angus, Lawrence E. Bray, Robert C. Cashin, Paul H. Graven, Charles Haeuser, Roger M. Herbst, Maynard W. Meyer, Robert P. Potter, Donald M. Schoepke, Al J. Seitz, Norman Sommers, Allen J. Strang, William P. Wenzler and Robert L. Yarbro. This represented 100% attendance, with all officers and directors present.

Allen J. Strang, retiring ex-officio, received the appreciation and tribute of the members of the Executive Committee who had served with him through his years as director, vice-president, president and ex-officio.

A Nominating Committee, responsible for naming candidates for the Director-at-Large positions, was appointed. A. A. Tannenbaum for the Southeast Section, Allen Strang from the Western Section, Julius Sandstedt in the Northeast Section and Donn Hougen of the Northern Section are members of this committee.

Continued on page 23

P/C

Producers Council

At this writing, we are in the midst of the Holiday Season. Everyone busy with shopping and one social event after another. And speaking of social events, the Council held its annual Christmas Party on December 9 at the Copper Hearth in Milwaukee. What a blast that was! Herb Rother and Howard Boelkow were the co-chairman and had set up for 250 people and around 400 showed up. Nevertheless, the Christmas spirit prevailed and all had a good time.

A word about the PC Satellite Meetings. The first series of meetings have been completed and chairman "Pete" Alexander reports a good average attendance for the groups sponsoring the program. The next series of meetings will begin the last week of January. This is a good opportunity for the architects to get the lowdown on new products without taking up valuable office time. It is also an opportunity to bring a number of architects and Council Members together for an informal "bull session." After all, we are eager to find out what Mr. Architect needs and how we can do our job better to serve him. Watch for the advertising on these Satellite meetings. They are designed for everyone's benefit.

I have been hearing a great deal of good comments about the AIA Convention coming up in May. After a most successful convention last year, this one looks like it will be bigger and better than ever. I, for one, am looking forward to supporting and being a part of it.

After reviewing the Council programs set up for the year, it looks like this will be the busiest in the Chapter history. This, plus a number of new companies showing an interest to join the Council, indicates a promise of a most successful 1965.

Watch for the mailers on Council activities and we'll be watching for you.

RUSSELL SANDHOEFNER

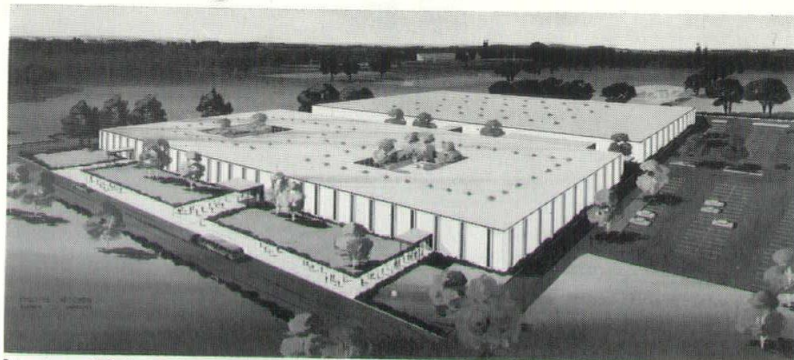
President

Wisconsin Chapter

Producers' Council

Wisconsin Architect — January, 1965

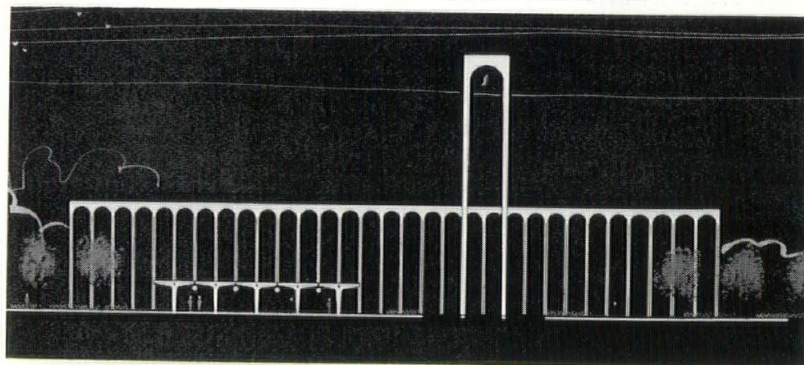
New buildings in Wisconsin



*Nathan Hale Senior High School, West Allis, Wis.
Schutte, Phillips, Mochon,
Architects, Planners, Engineers*



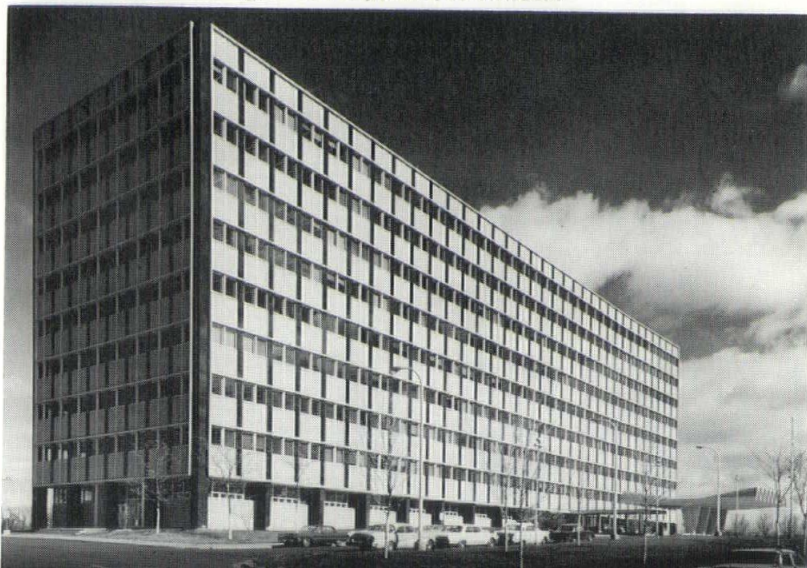
*Cherry Court Housing Project for the Elderly,
24th St. and Galena St., Milwaukee, Wis.
Schweitzer-Slater Associates, Architects, Milwaukee, Wis.*



*The Milwaukee Road Depot
Donald L. Grieb Associates, Architects, Milwaukee, Wis.*

Below:

*Hill Farms State Office Building, Madison, Wis.
Grassold-Johnson-Wagner & Isley, Inc., Architects*



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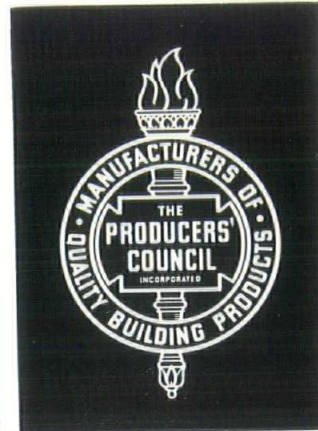
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and good luck on this new venture.*

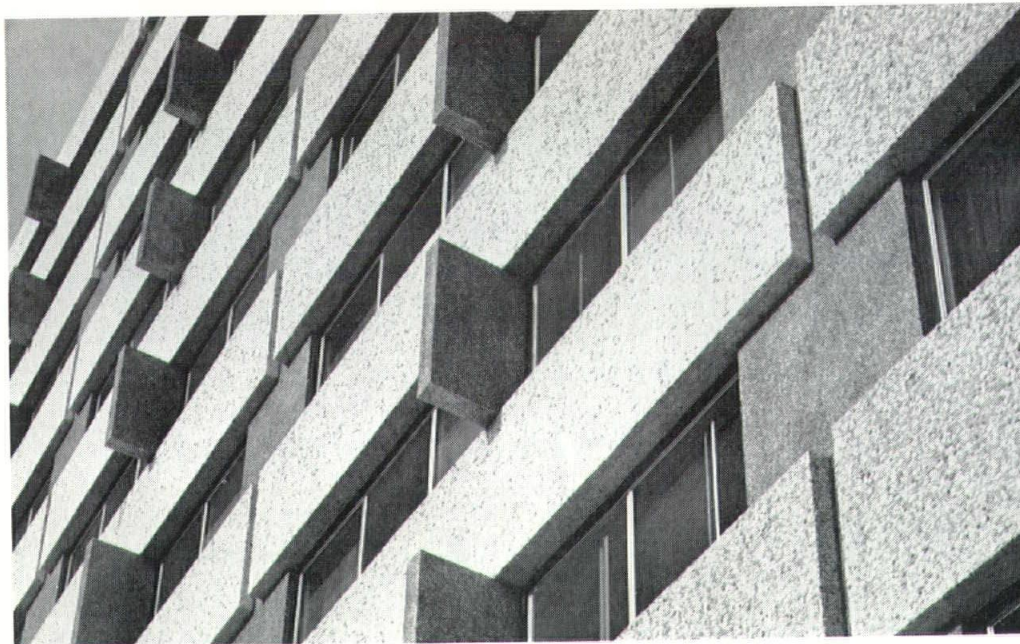
We will be seeing more of you all in '65



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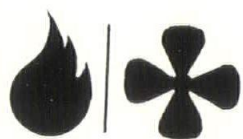


University of Wisconsin Dormitories
Madison, Wisconsin
Architects:
J. & G. Daverman & Associates

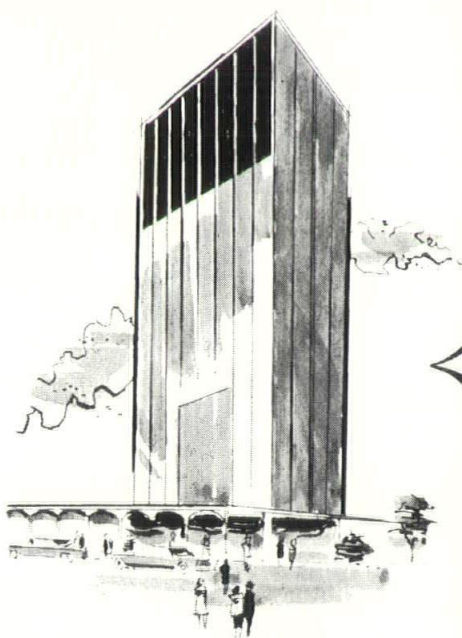
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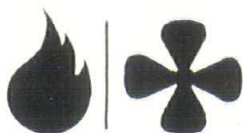
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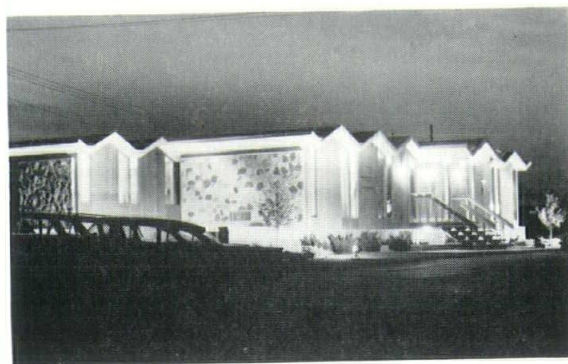
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New Medical Clinic — Menomonee Falls

This new and modern building is comfort-conditioned all through the year by electricity — electric heat in the winter, air-conditioning in the summer. Outdoor lighting includes infra-red lamps to keep entry clear of snow, and dry in bad weather.

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Medical Specialties Building

A distinctively designed special purpose building, the Medical Specialties building in Menomonee Falls employs a total electric system for year around climate control zoned to accommodate a wide variety of occupancy and use.

The 6,500 square foot building includes doctors' offices, examining rooms, waiting rooms and pharmacy. Portions of the building are in use at varying hours of the day and night.

Completed in 1963 the building has won all-season approval of occupants and visitors for its ultimate comfort in heating, cooling and ventilation. Careful planning of the installation has also eliminated such annoyances as medicinal and smoky odors, drafty floors and undesirable sound transmission.

Success of the project is credited largely to careful planning with four-way communication between the architect, the owner, the electric utility and the electrical contractor.

Richard W. Scheife Associates, served as architects for the building. Wisconsin Electric Power Company personnel assisted both the architect and the electrical contractor, Melius Electric Co., with the planning of the heating and cooling.

A variety of electric fixtures assures the comfort

levels and zone controls outlined in the building's plans.

A visitor to the building is introduced to the warmth of electric heat even before entering under three infrared fixtures mounted above the front stairway. These fixtures add to the night lighting of the building and melt snow from the stairway.

Two electric blowers just inside the main entrance warm the entry hall.

Areas of overhang as well as the pharmacy and waiting room which are separate from the building proper are heated by electric floor cable. Through-the-wall, year around air conditioning units were also added in these areas to provide for additional heating as well as for cooling and ventilation.

Two electric furnaces circulate tempered air throughout the offices, examining and surgery rooms and lounges for general heating and ventilation as well as for summer air conditioning.

Each room includes a baseboard electric heater with a wall thermostat to assure individual comfort at all times. Each unit is large enough to permit rapid temperature increase on demand. This extra comfort has proved particularly popular with the "diaper set."

Doctors have reported that patient load has trebled and plans to enlarge the building are being considered.

A report of the recent State Executives Meeting and Component Editors' Meeting in Washington, D. C., was presented.

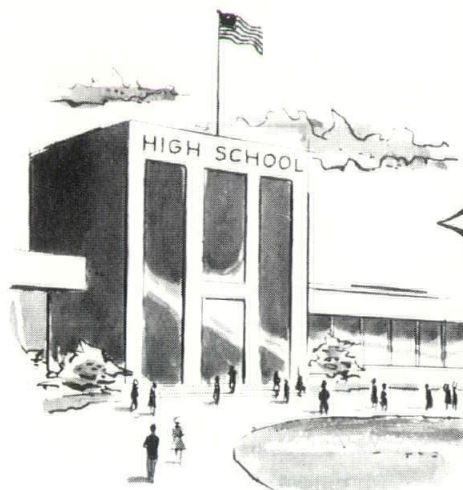
The Public Relations Committee was granted a special appropriation to extend its exhibit equipment and to proceed to develop a revised brochure for public relations use.

Sheldon Segel, chairman of the 1965 Convention Committee, reported on the progress in this annual meeting. The theme, "The Illusion of Space," has been fairly well developed and a number of important and informed speakers have accepted invitations to participate.

The meeting was adjourned at 4:15 p.m.

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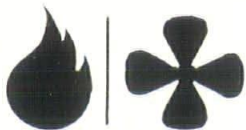
Nothing can be quite so important in the planning of a building as the health and safety of the people who will work in it.

On both counts . . . health and safety . . . Hydronic Heat is FIRST.

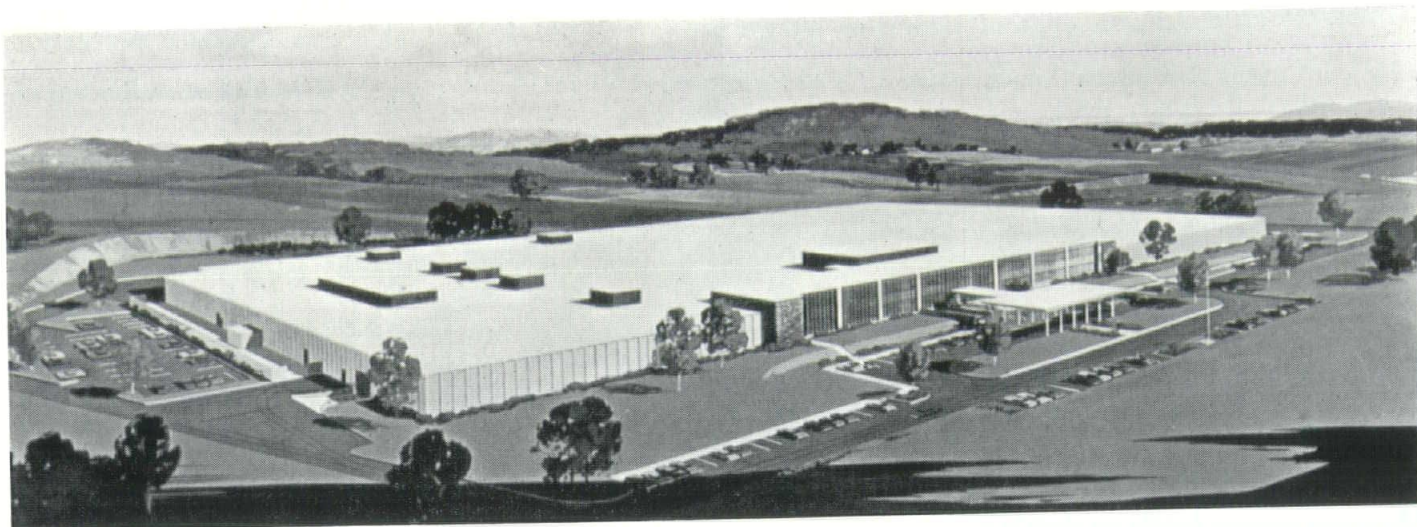
Healthful because it is CLEAN. Because it does not circulate air from room to room, it does not circulate DUST and GERMS from room to room.

Safe because there is no dust accumulation in unsightly ducts, no overheated air . . . nothing to cause a possible explosion.

Consult with your heating engineer or Hydronic Contractor.



Year 'round conditioning section



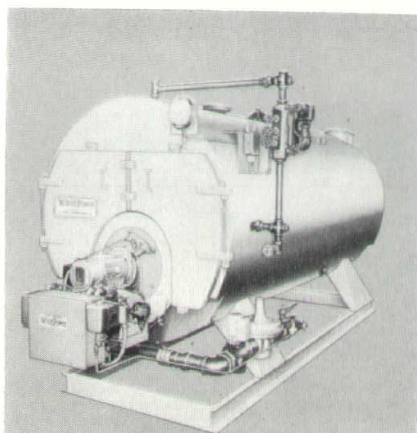
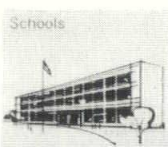
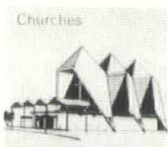
Space Conditioning Systems Inc., headquarters in Harrisonburg, Virginia, is a division of Electronic Specialty Co. of Los Angeles, California.

Behind the decision to locate the Corporation's Space Conditioning Systems

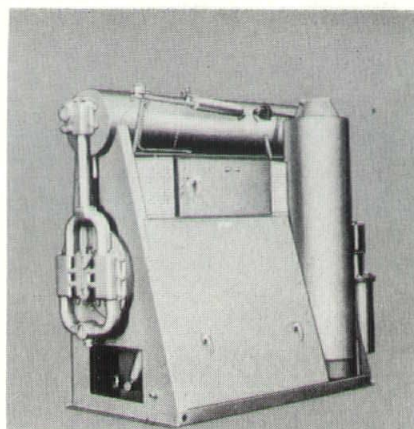
manufacturing facility in Harrisonburg, Virginia, was a comprehensive survey. The survey indicated Harrisonburg to be economically attractive for the production of programmed comfort control products based on the geographic location, quality and availability of potential production personnel, and local construction and operating costs. Also important to the decision was the excellent cooperation of the Rockingham Development Corporation and the Governor's office of the State of Virginia. The attractive economic climate, confirmed by the successful operations of other large companies who have made similar selections, virtually assures the Space Conditioning Systems Division of competitive operating conditions.

The Harrisonburg plant consolidates the operations previously carried on in six separate facilities — at Cleveland, Ohio, Camden, New Jersey, and Indianapolis, Indiana — into one 540,000 square foot plant (equal to nine football fields under one roof). It assures:

- Modern 540,000 square foot (90 acre site) facility to produce integrated programmed comfort control systems.
- Complete metal forming area for production of new modularized cabinets and enclosures.
- Complete fabrication area for production of boilers, chillers, and component weldments.
- Integrated machinery area for production of hydronic components and transmission equipment.
- Automated electrostatic painting and finishing equipment.
- Conveyorized production assembly lines for burners, evaporators, furnaces, air conditioners, humidifiers and chillers.
- Modern research center for comfort control systems and components.
- Centrally located for market distribution in skilled labor area.
- Development laboratories for AGA and underwriters specification testing.
- Complete publications facility to support marketing and distribution channels.
- School rooms and training facilities.
- Central service center — spare parts — engineering support group.
- Large conveyorized central warehousing facilities — IBM control system.
- Complete communications center linking regional warehouses and service centers, distributors and dealers.
- Diversified complete line of comfort control components and systems.
- Expanding network of modularized regional service centers in major marketing areas.
- On the spot stock to support dealers and distributors of products tailored to regional requirements.
- Local production of transmission ducts and accessories for total system requirements (lower freight rates — lowest cost production).
- Company operated tractor trailer fleet for maximum flexibility and customer service.
- Installation and service capability to support dealer sales.
- Mobile fleet of service trucks for on-the-spot maintenance and service.



Generator



Gas Absorption Chiller



Unit Ventilator Accessories for Schools

Advanced Engineering Makes the Difference

We give you in all our space conditioning systems:

- Maximum operating economy
- Greater flexibility to fit any requirement
- Easy maintenance to save you money
- Extra durability
- Feather quietness

And outstanding quality in the industry's most advanced space conditioning systems are adaptable for apartments, churches, shopping centers, schools and motels.

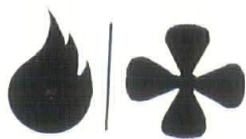
Be sure and specify Iron Fireman-Webster for your next space conditioning system.



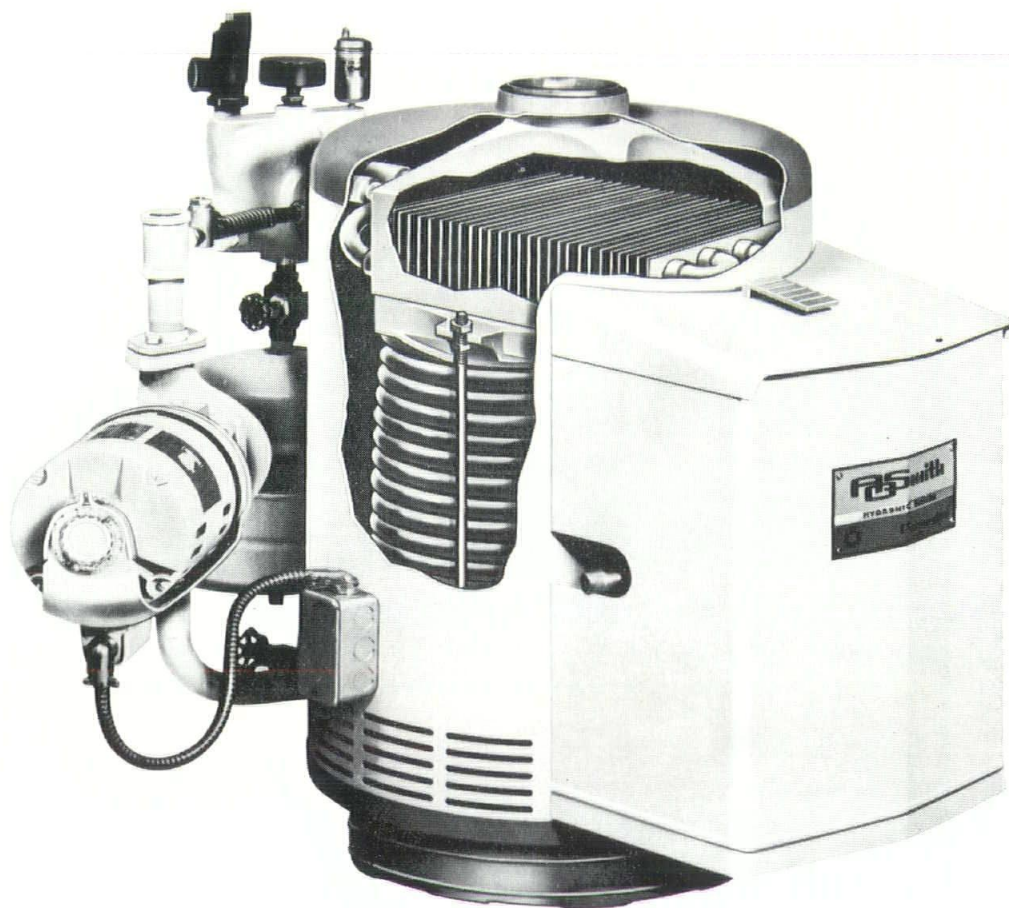
SPACE CONDITIONING SYSTEMS
IRON FIREMAN-WEBSTER, INC.

A SUBSIDIARY OF ELECTRONIC SPECIALTY CO.

2850 NORTH TEUTONIA AVENUE
 MILWAUKEE, WISCONSIN 53206
 PHONE: FRanklin 4-5200



Year 'round conditioning section



A new line of hydronic heating boilers, incorporating a built-in revolutionary design to eliminate noise and provide near-perfect gas modulation, has been announced by A. O. Smith Consumer Products.

The new 640 series provides the industry with the only boiler with modulating gas control and unique flow bypass designed right in. These boilers have completely packaged accessories, including A. O. Smith's exclusive Magic-Heet and "Hydronic Balancer"® built in, the firm stated.

All that troublesome spot steaming, cycling and noise have been designed out and the two important built-in design features head a number of innovations that make the A. O. Smith boiler, with copper coils and heat exchanger, the most complete boiler designer for modern hydronics and replacement heating.

The factory-installed Magic-Heet modulating gas valve, which automatically raises or lowers the flame to keep perfect pace with changing heat requirements, is a must for zoned heating, A. O. Smith stated. The built-in Hydronic Balancer®, is A. O. Smith's exclusive contribution to better boilers. This bypass

feature assures proper flow rate through the boiler — eliminating spot steaming, cycling and troublesome noise.

In addition, there's the copper-coil construction which insures rapid heat-up and minimum over-ride, plus the larger diameter copper water-ways, which give 50% less pressure drop. There is also a new exclusive A. O. Smith burner that uses double air entrainment for perfect combustion.

Considered the most compact and lightweight boilers in the industry, the new 640 Series boilers range from 80,000 to 200,000 BTU/hr input for residential use. Other models are available for commercial applications.

Perhaps one word, more than any other, sums up the problem which coal has faced in competition from gas and oil — "convenience."

If any trend stands out in the American economy today, it is that machines are becoming more powerful, better controlled, and easier to build. And this is the hope of coal. Better machines will allow coal to make use of its cost advantage.



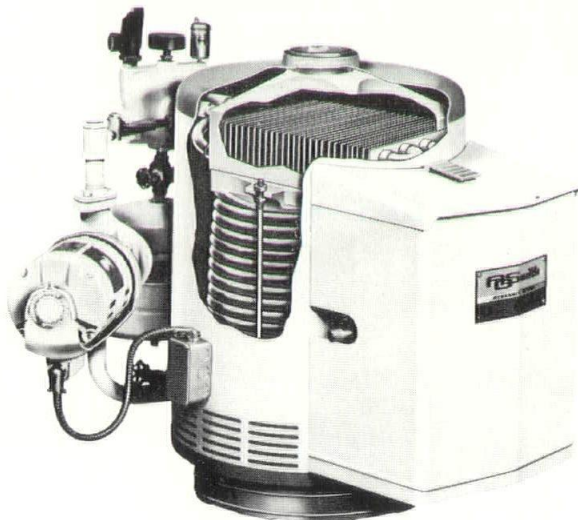
© A. O. Smith, 1963

For hydronic heating in:

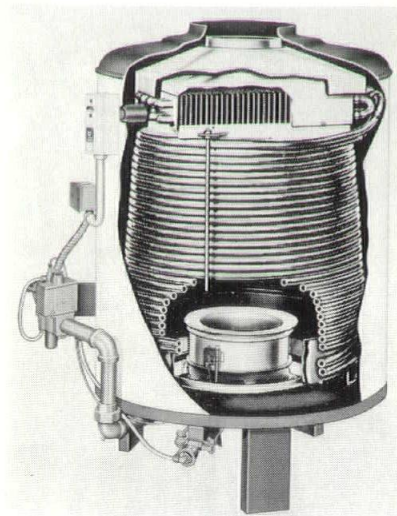
APARTMENTS • SCHOOLS • OFFICE BUILDINGS • MOTELS • FACTORIES • STORES



HW-300



HW-640



HW-420

- Lightweight
- Simple venting
- Compact
- Magic-Heat modulating controls
- Save on installation costs
- Save on operating costs
- Save on costly space
- Save on fuel

Always better, more comfortable heating

Distributed by

Auer Steel & Heating Supply Co.

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Wickes Boiler Unit
at the Purity Cheese Co.,
Mayville, Wis.

The engineering for this
completely packaged unit
was drafted under the
direction of the Office of
Coal Research, Washing-
ton, D.C. in cooperation
with Wickes Boiler Co.

Another First!

PACKAGED COAL FIRED BOILERS

"A" TYPE BOILER

SPREADER STOKER WITH
PULSATING GRATE

OVERFIRE AIR
TURBULENCE CONTROL

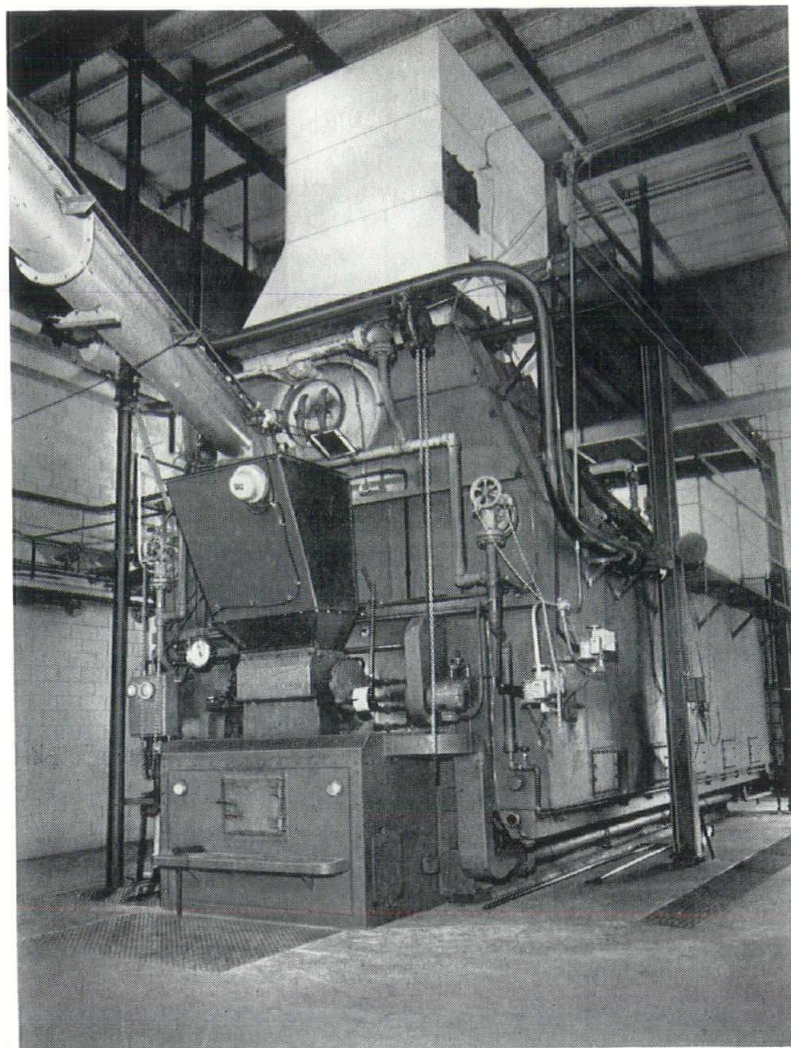
FORCED DRAFT FAN

FLY ASH REINJECTION SYSTEM

COMBUSTION AND FURNACE
DRAFT CONTROLS

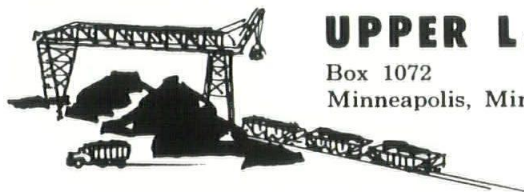
INSTRUMENT PANEL

FEEDWATER REGULATOR



***Complete Factory Fabrication of the Entire
Plant... Including Integrated System of
Steam Generation, Coal Handling System,
and Automatic Ash Disposal***

- Overall boiler efficiency — not less than 76.5%
with optional economizer 82.5%
- 40% savings in construction costs
- Labor costs — one man, intermittent attendance
- 20,000 to 100,000 lbs./hr. of steam capacity
- Complete plans and specifications available



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Minneapolis, Minnesota 55440

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Milwaukee, Wisconsin 53218

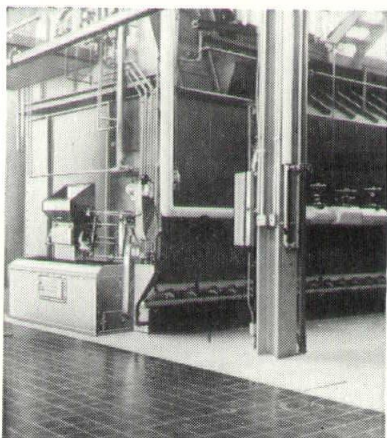
PHONE: 464-8170



Year 'round conditioning section

Coal may be one of man's oldest fuels . . .

but it took WICKES to find a new way to use it.



WICKES, a world leader in steam generation for a 100 years, has come up with a new concept in using coal—man's oldest and most abundant fuel. It's the new WICKES AC Coal Fired Unit, combining a versatile WICKES A Type Boiler and a time-proven spreader stoker. This all new unit will produce steam or high temperature hot water quickly and economically.

Shop assembled and built for easy, economical "no basement" installation, WICKES AC Units are available in four standard sizes, with steam production ranges from 20,000 to 50,000 pounds per hour.

Low capital cost, short time delivery, early operation of plant and WICKES famous Unit Responsibility are all important features of this WICKES AC Coal Fired Unit.

Contact your nearest WICKES Sales Office for complete information on the revolutionary WICKES AC Coal Fired Unit.

WICKES BOILER CO.

DIVISION OF THE WICKES CORPORATION



SAGINAW, MICHIGAN

WISCONSIN SALES OFFICE: 7412 W. STATE ST., MILWAUKEE

"—leading the way in Steam Generation for over 100 years."

PACKAGED BOILERS — three fold increase in capacity of coal fired units. Condensed from an article by Harold E. Wefald for "Coal Today and Tomorrow."

Now from the Office of Coal Research in the United States Department of Interior in Washington, D. C., comes the announcement of a new design for a fully integrated packaged boiler, which represents one of the most practical, and to all appearances to date, one of the most successful, efforts to accelerate this trend.

These units which are factory assembled, and can be shipped by rail to almost any erection site in the country, are expected to lower the cost of coal fired boilers to the point where they are competitive with oil and gas fired equipment, thus opening up great market potentials for coal in small and medium sized boilers.

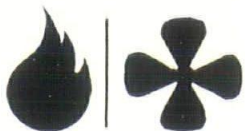
This accomplishment is no accident. In 1962, the Office of Coal Research granted a contract to the consulting engineering firm of Pope, Evans and Robbins of New York to develop a superior design for a completely integrated system for steam generation, including coal handling and ash and dust collection. Several systems of coal pulverization were investigated. In the matter of coal handling it was decided that the automatically evacuated coal-tank concept represented

the coal supply system of lowest overall cost in terms of construction and operation for plants of capacities above 30,000 pounds.

In November of 1933, Pope, Evans and Robbins forwarded to the Office of Coal Research their final report, together with plans and specifications for the actual construction of the boiler in the various capacities.

The first OCR boiler package using these plans, a single 30,000 pound unit, was constructed by Wickes Boiler Company for the U.S. Paper Company in De Pere, Wisconsin. It was fired up successfully in May of 1964, marking the fruition of one of the most practical examples of research in the service of industry.

The success of this design has depended primarily upon the solution of the problem of obtaining a high heat release with a limited furnace volume and grate surface. The OCR boiler is designed for a maximum furnace heat release of 54,000 BTUs per cubic foot per hour and a heat release from the active grate of 650,000 to 750,000 BTUs per square foot per hour.



Year 'round conditioning section



Left to Right: Allen, Edward, Robert and Burt Zien.

Four Brothers Make It Work

Zien Plumbing and Heating Company was originally founded in 1929 by Herman Zien, father of the four sons now operating the firm at 4450 N. Oakland Ave. in Milwaukee.

Herman Zien was a journeyman plumber and subsequently a master plumber. He was foreman with Wenzel and Henoeh prior to going into business for himself.

Herman Zien conducted his plumbing business with five employees, mainly concerned with residential and commercial plumbing.

Today, the four brothers, Allen, Edward, Robert and Burt, share the responsibility of operation of Zien Plumbing and Heating Company. Herman Zien died in 1958 at the age of seventy.

Edward Zien, the youngest of the four brothers, is president of the firm. He decided to take up the trade of his father and went through the apprenticeship program, received a journeyman's licence and now holds the Master Plumber License.

Robert Zien, a registered professional engineer, is vice-president of the company. He studied mechanical engineering at the University of Wisconsin, and was

recipient of a scholarship in heating and air conditioning at Carnegie Tech in Pittsburgh.

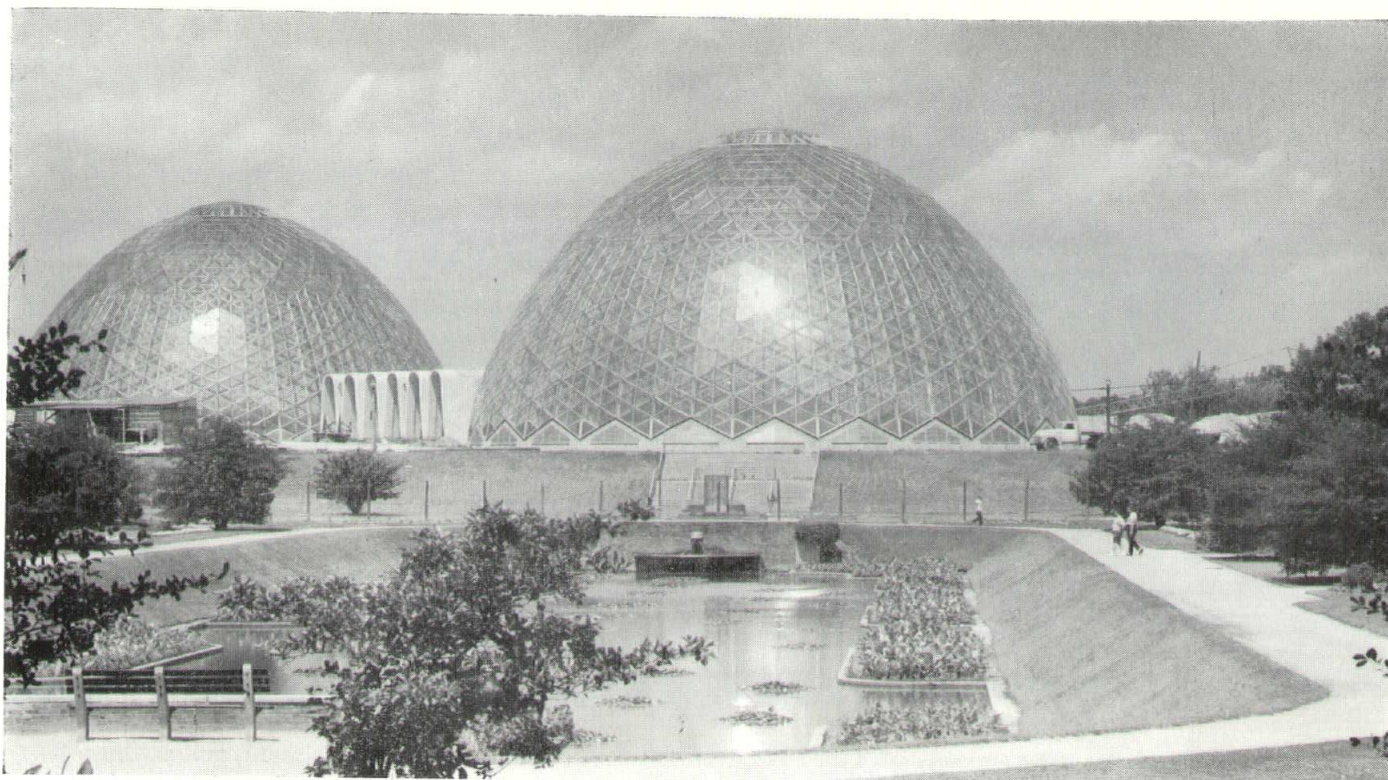
Allen Zien, secretary-treasurer of the firm, studied at the University of Wisconsin and graduated with a BA, majoring in commerce.

Burt Zien is general manager of the firm and chairman of the board of directors. He graduated in mechanical engineering from the University of Wisconsin.

In 1946, after all four Zien brothers returned from service in World War II, Edward, Allen and Robert entered into business with their father. Burt joined the firm in 1950.

Since then, Zien Plumbing and Heating Company has expanded to an average of 260 employees. Scientific management increased the business from \$250,000.00 in total sales to approximately \$5,000,000.00 a year.

The brothers developed an engineering staff of plumbing, heating, and air conditioning specialists. The company now employs 260 plumbers, fitters, sheet metal workers, laborers and air conditioning men. Fifteen employees are in the administrative department. The company is one of the leading mechanical contractors in the state of Wisconsin, both in size and type of work.



Architect: Donald L. Grieb

Zien Plumbing & Heating Company

We are privileged to install the heating, air conditioning and ventilating in the Mitchell Park Conservatory designed by

DONALD L. GRIEB, Architect

A few of Zien's major projects recently completed or now under construction include:

- Carthage College Complex, Kenosha — heating, ventilating and air conditioning.
• Architects — Mittelboucher, Tourtelot
- Tremper High School, Kenosha — heating, ventilating and air conditioning.
• Architect — John Flad
- Goodwill Industries Building — plumbing.
• Architect — Kloppenburg & Kloppenburg
- Greyhound Bus Terminal — heating, ventilating and air conditioning.
• Architect — Robert Lee Hall
- Columbia Hospital Addition — Milwaukee.
• Architect — Eschweiler, Eschweiler and Sielaff
- J. C. Penney Warehouse — heating and air conditioning.
• Architect — Miller & Waltz
- Cutler-Hammer Office Building — plumbing and heating.
• Architect — Eschweiler, Eschweiler and Sielaff
- St. Columban's Catholic Seminary, Oconomowoc — plumbing.
• Architect — Barry, Byrne, Parks
- State Correctional Institution, Fox Lake, Wis. — heating, ventilating.
• Architect — Curtis & Davis
- Wisconsin Telephone Co. Milwaukee Toll Building — air conditioning.
- Mt. Mary College, Caroline Hall — plumbing.
• Architect — Herbst, Jacoby & Herbst
- Alexander Hamilton School — plumbing, heating, air conditioning.
• Architect — Brust & Brust
- Coach House Motor Inn — plumbing, heating, air conditioning.
• Architect — Sheldon Segel
- Mt. Sinai Hospital Nurses' Dorm and Intensive Care Unit — plumbing and heating.
• Architect — A. Epstein & Son
- Pfister Hotel Addition — plumbing.
• Architect — Rasche, Schroeder Spransy & Associates
- South Milwaukee High School — plumbing.
• Architect — Edgar A. Stubenrausch
- YMCA, North Side — heating and ventilating.
• Architect — Grassold-Johnson-Wagner & Isley, Inc.
- Marquette University, Schroeder Hall — plumbing.
• Architect — Brielmaier, Sherer & Sherer
- Wisconsin State Office Building, Milwaukee — plumbing, heating, ventilating, air conditioning.
• Architect — Grellinger-Rose Associates, Inc.
- Grafton Elementary School — plumbing work.
• Architect — Darby-Bogner & Associates, Inc.
- James Madison Senior High School.
- Kettle Moraine High School.
• Architect — von Grossmann-Burroughs-Van Lanen
- Oconomowoc High School.
• Architect — Warren Holmes

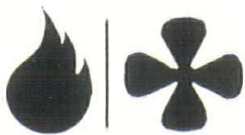
ZIEN is one of the few mechanical contractors in its field whose organization is headed by a **Registered Professional Engineer** and supported by seven engineering specialists. Our engineering staff is one of the finest in this area.

We can offer you the service of over 200 craftsmen: Plumbers, steam fitters, sheet metal workers, air conditioning and refrigeration specialists, lawn sprinkler installers.

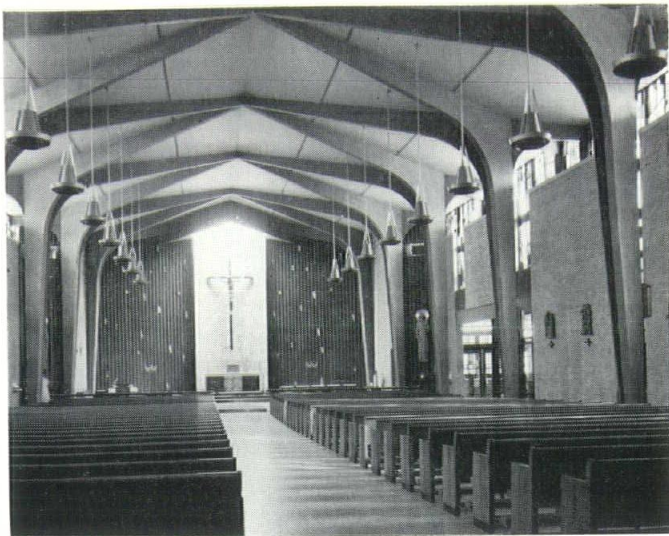
Please let us estimate your next job.

ZIEN PLUMBING & HEATING COMPANY

4450 N. Oakland Avenue • 964-4110



Year 'round conditioning section



St. Bernard's Catholic Church, located just west of Milwaukee is a little too far from the cooling breezes of Lake Michigan. Summer temperatures often range about 10° higher than in Milwaukee.

But, even with an extreme southern exposure the church has complete year 'round climate control at minimal operating costs.

"Maximum climate control savings were designed into the church from its inception," said Paul Brust of the Architectural firm of Brust & Brust. "Insulation affects both operating costs and equipment capacities — so we used it to the best advantage.

"The floating roof construction, heavily insulated, is supported by huge laminated trusses without any side wall support." Brust continued, "Laminated wood trusses were used in a lace-like pattern to show forth the structural qualities of the building and at the same time provide a strong interior design pattern, which is the key element in the appearance of the church interior.

"The masonry walls of the church are face-bricked on both interior and exterior surfaces, which in addition to aesthetic appeal also provides 'dead air' space with insulating value," said Brust.

The automatic year 'round climate control system makes full use of variable capacity equipment plus up to 100% fresh outdoor air to keep operating costs at minimal levels.

The system is made up of matched Worthington Air Conditioning Company components and is automatically varied from 12 to 75 tons of cooling or has "free" cooling with the introduction of up to 100% fresh outdoor air.

The Worthington 3VC6/6 duplex compressor has eight stages of capacity modulation in steps ranging from 16% to 100% of its maximum 75 tons of cooling. The mated No. 800 Worthington evaporative condenser is tailored to the compressor's modulation range.

A horizontal air handling unit, Worthington CHN50, produces a constant volume of 25,000 cubic feet of air per minute the year 'round.

AIR HANDLING UNIT PROVIDES THREE SERVICES

In addition to moving air, the unit contains a cooling coil, steam coil and 100% fresh air provision. The cooling coil is equipped with two solenoid valves for reducing its capacity automatically to 50% when called for by the automatic control system. This allows for easier compressor unloading to aid the modulation range and also helps reduce operating costs.

The steam coil is a two row, non-freeze type with a maximum capacity of 1,870,000 Btuh. Its capacity can be modulated from 8% to 100% with the modulating steam value (from 149,600 to 1,870,000 Btuh).

Result? A complete year 'round climate control system which automatically tailors itself to the structures' demands with maximum cost savings.

AIR CONDITIONING A NECESSITY

St. Bernard's pastor, the Very Reverend Monsignor Dennis Barry, said, "Our main purpose in obtaining complete climate control was to keep our parishioners comfortable. We have six Sunday Masses, one every hour and 15 minutes, beginning at 6:00 A.M. Even in mild weather it doesn't take long for a congregation to generate sufficient heat to make a church uncomfortable.

"Church attendance during the various Masses is about the same at all times of the year," said Monsignor Barry.

The church is 175' long, 60' wide and 35' high. The nave or main section of the church will seat 675 persons. In addition, there is space for 35 in the Mothers' (or crying) room and 85 in the choir balcony. The air conditioned crying room seemed to have an effect on reducing the amount of actual crying by the infants.

In addition to the forced air system, the Sanctuary has a Roman Travertine marble floor which rests on a poured concrete base with radiant in-slab heating. All mechanical equipment, except the outdoor evaporative condenser, is located in the full basement.

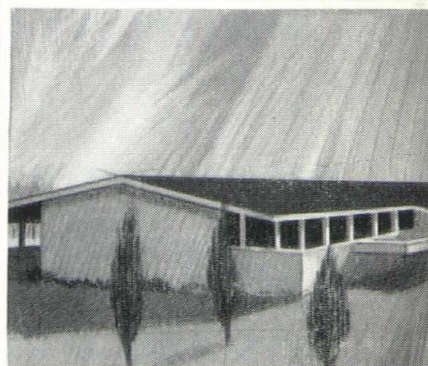
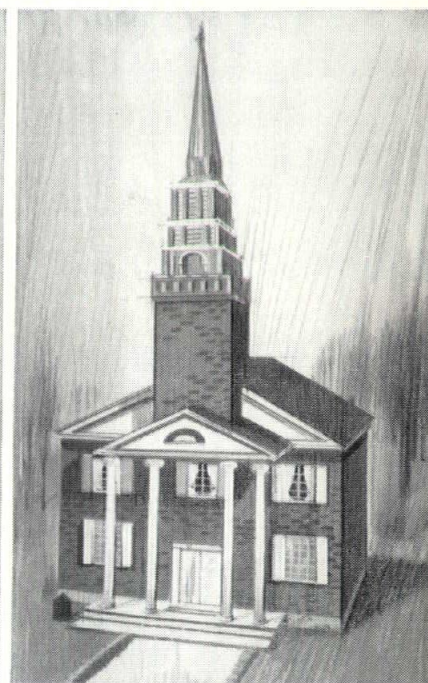
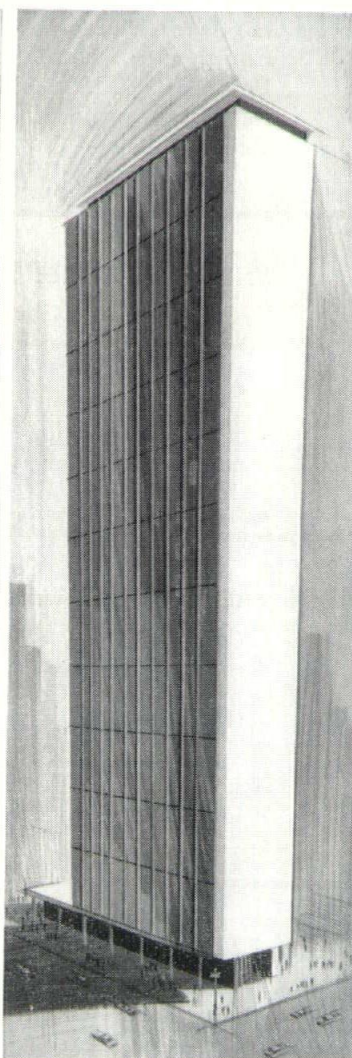
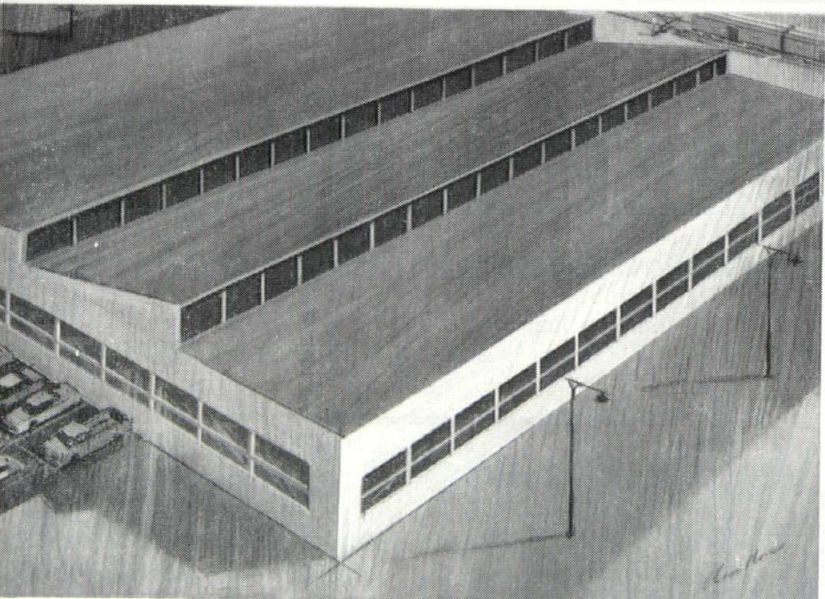
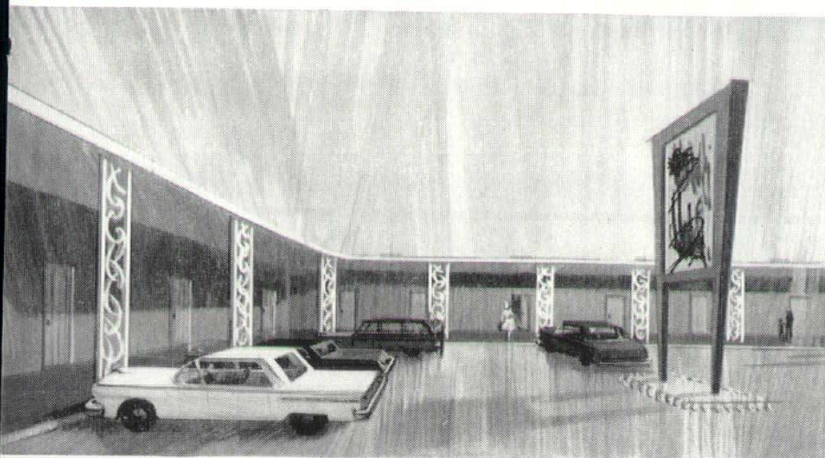
CLIMATE SYSTEM ALSO PROTECTS CHURCH

A large Crucifix, behind the main altar, is made of birch and finished with flat black lacquer. It is 16' in height with a crossarm width of 8' 3". The lindenwood Corpora (figure of Christ) was hand carved by Ermanso Moroder of Balzano, Italy. The artist also carved 7' lindenwood statues of the Blessed Virgin and St. Joseph. All fourteen Stations of the Cross were carved from the same wood by Moroder.

The Reuter console and pipe organ contains more than 1,000 metal and wood pipes which are capable of producing tones of the flute, reed, string and diapason.

Organ sound fidelity is protected by the year 'round climate system.

Worthington can cool anything that can be built



For big jobs and small ones, Worthington can give you completely packaged Climatrol units from 2 to 60 tons, Sentry chilled-water systems up to 3500 tons in a single unit, and a complete line of Worthington air handling equipment.

And in heating, Worthington offers you heating, heating/cooling systems for homes, apartments and commercial installations—oil, gas or electric, warm air, steam or hot water.

Worthington saves you money through prepackaged auxiliaries, factory wiring, piping and controls. Work with us and get all the technical assistance you need in planning

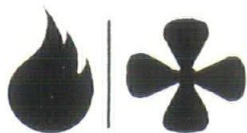
your job, and complete service follow-through after it's in operation.

Whether it's cooling, heating or condensing equipment, you get a full and complete choice with Worthington. Write to: Worthington Air Conditioning Company, Dept. 12-1, Harrison, New Jersey.



WORTHINGTON/CLIMATROL
AIR CONDITIONING

HEATING AND COOLING FOR HOME, BUSINESS AND INDUSTRY



Year 'round conditioning section

M. L. LAVORGNA

Registered professional engineer, graduate of Maine University, started M. L. Lavorgna Inc., 5542 W. Fond du Lac Ave., Milwaukee, Wis., in 1949. M. L. Lavorgna is an expert in power plants and burners. He is distributor for Janitrol Heating and Cooling Equipment; Humid-Aire Products which include Power Humidifiers. He was associated with the following large projects: Wausau Paper Mills, Mosinee Paper Mills and Carroll College, Waukesha.

WILLIAM REMMEL

Graduate of Milwaukee School of Engineering, for 10 years in the field, joined the firm two years ago. His specialty is Heating, Ventilating and Air Conditioning. Larger projects he was associated with: Lewis Center, North Shore Country Club, Rhinelander Paper Company and Berlin Sewerage Plant.

FRED E. HOFFMANN

Has 18 years of experience in the field and joined the firm four years ago. He is an Industrial and Commercial Water Conditioning Expert. Larger projects he was associated with: Columbia Hospital, Milwaukee; Waukesha Memorial Hospital; Dominican College, Racine; Libby Food Processing Plant in Darien and West Bend High School.

E. H. (Sam) SCHULZ

Has 40 years of experience in the field and joined the firm 14 years ago. He is an expert in Heating and Infra-Red Heating. His territory is the Fox River Valley. Larger projects he was associated with: Mercy Hospital, Oshkosh; Manitowoc School System; St. Norbert's College.

ALBE (Al) STEGEMAN

Has 20 years of experience in the field and associated with the firm four years ago. He is the Heating and Air Conditioning, Residential and Commercial, and the Burner Equipment expert. Projects associated with: Pabst Farms; The Pet Milk plant in Belleville, Wis.; The Holy Cross Hospital, Merrill, Wis.; The Golden Age Nursing Home, Rhinelander, Wis.

The greatest names in the industry

Chrysler

*Air Conditioning Equipment
Chillers and DX Compressors
Air Handling Units*

Elgin Water Conditioning

*Commercial — Industrial
Deionizers — Softeners*

Infra-Red Heaters

*Space Heating — Processing
Vented and Unvented*

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Make-up Air Units — Indirect and Direct
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North American Atlas
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Commercial-Industrial Gas/Oil Burners

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PEERLESS

OF BOYERTOWN PENNSYLVANIA
SINCE 1908

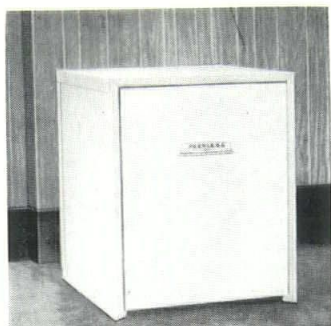
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Modern Hydronic Home Heating

SPACE SAVING

A Modern Miracle in Home Heating

The Peerless MM Series Boiler — a completely automatic gas fired unit offers all the proven comfort and cleanliness of dependable hot water heat. Like the atom, "Mighty small but mighty powerful," the MM provides a large heating capacity in a limited space. GOOD LOOKING ANYWHERE YOU INSTALL IT.

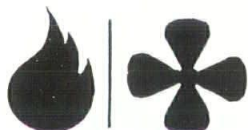


CRICHTON CORPORATION

1114 N. 4th St.

276-8950

Milwaukee, Wisconsin



Year 'round conditioning section

Peerless of Boyertown, Pennsylvania, produces Super Series 170 new high capacity Cast Iron Boilers in 33 sizes, 680,000 to 6,120,000 BTU input per hour for use with natural, manufactured, mixed and L. P. gases.

PEERLESS SPACING PADS ELIMINATE SECTION STRAINING AND LONG IRON-TO-IRON CONTACT

All Peerless of Boyertown Cast Iron Water Tube Sections, when assembled, are evenly spaced with spacing pads. These special pads are a component part of each section and are precision ground so as to fit evenly (one section to another) when the boiler is completely assembled. The proper spacing of sections eliminates any harmful strain due to expansion or contraction caused by the on and off operation of the boiler. Long iron-to-iron contact between sections is also eliminated, thereby permitting PEERLESS sections to maintain their overall natural *as-cast* skin that provides maximum corrosion resistance for longer life. Spaces between section are sealed with special boiler sealing compound after complete assembly. This assures a sealed enclosure for the hot gases within the section block, for maximum heat retention.

The Peerless Series "170" boiler is equipped with horizontal to vertical flue collectors and draft diverters. This assembly maintains a predetermined height of the flue outlets regardless of boiler size, and eliminates the necessity of space wasting, high ceiling boiler rooms. High chimneys, forced or induced draft are not required for efficient boiler operation.

Peerless quality includes factory preassembly of base, burners, pilot line, manifold with orifice adapters, and gas controls. This insures correctness and ease of installation. Illustration shows this factory assembly for inspection and checkout. The total assembly is then disassembled into sections most convenient for crating and shipping.

Burners are cast iron, five row, with raised ports, center drilled and connected with ground joints to Venturi throat mixing tubes and adjustable air shutters. The Special Peerless design and construction of burner, mixing tube and head insures quiet, smooth, high capacity operation. Complete and concentrated combustion produces high flame temperatures and high efficiency. They are easily removed for inspection. Burners are universal for natural, manufactured, mixed, and L. P. gases.



Heating and air conditioning for HOMES
STORES
OFFICES
APARTMENTS
OR INDUSTRY



CRICHTON CORPORATION

EXCLUSIVE CARRIER DISTRIBUTOR — 1114 NORTH FOURTH STREET

MILWAUKEE, WISCONSIN

276-8950

WEATHERMAKER SPLIT SYSTEMS PROTECT YOUR INVESTMENT IN CENTRAL AIR CONDITIONING

Design of the basic refrigeration cycle — the compressor and coils — determines to a large extent the efficiency and life expectancy of the air conditioning equipment. Here Carrier leads the rest, because Carrier designs and builds compressors and coils to operate as one complete unit.

The compressor used in the smaller Weathermaker Condensing Units is the Carrier Micromite, the result of a new philosophy of simplified precision design for compressors. Over 14 years of laboratory research and two years of exhaustive field testing guarantee the Micromite's reliability under all conditions.

The two larger Weathermaker Condensing Units use the famous Carrier 6D compressor, "work-horse" of the industry. An indication of its dependability is the fact that there are more 6D compressors in the 2- to 15-ton range in service today than any other type.

Both the outdoor and indoor coils used in Weathermaker Split Systems are designed to match compressor capacity and built by Carrier to rigid quality control specifications.

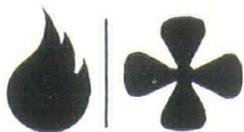
A thermal expansion valve is included with every Carrier Weathermaker condensing unit. It assures efficient, economical operation over the entire temperature range instead of at one point only as with the

ordinary capillary tube usually supplied by many manufacturers.

Electrical controls — the largest single cause of service problems — have been selected because of their ability to stand up under heavy duty service. The low-voltage transformer has internal fusing and external sheathing to protect it from moisture and damage.

An air conditioning system that fails when a hot spell starts is little better than no air conditioning at all. To guard you from this, Carrier Weathermaker Systems have more protective devices than any other make. The most important of all is a Carrier exclusive — the Time-Guard Circuit. This unique timing device monitors the entire refrigeration cycle to prevent compressor damage from excessive high pressure and temperature.

The Time-Guard Circuit alone can virtually eliminate unnecessary service calls caused by "nuisance" service problems, but it's backed up by such other features as a crankcase heater that prevents accumulation of liquid refrigerant in the compressor and makes starting easier, a high-low pressure switch for double protection against unusual operating conditions, and special overload protectors built into the compressor motor itself.



Year 'round conditioning section



Looking over a combustion head that improves the efficiency of out-dated furnaces are (left to right): Jim Otto, president, Madison Fuel Co.; Bill Goins, president of Madison Fuel Oil Assn., and Bob Felker, executive-secretary of Wisconsin Petroleum Assn.

The "automatic heat generation" — millions of families who first learned the joy and comfort of thermostatically controlled heat with the installation of their oil burners — will soon be joined by more millions of younger homemakers who are living to see oil heating reach its period of greatest development.

During the past ten years while gaseous fuels have had their day, oil research has methodically and painstakingly developed methods of making its fuel perform more economically, more dependably and more dramatically. These efforts are now paying off. Soon to be marketed are:

- Oil burners that can be held in the palm of the hand, and utilizing ultra-sonic vibrations to atomize the fluid oil for ultimate combustion efficiencies. . . .
- Oil burners that utilize controlled vaporization to produce revolutionary oil-air mixtures for complete, noiseless combustion at phenomenal efficiencies. . . .
- Oil burners that operate efficiently at tiny fractions of conventional gallonage . . . to make them adapted for use in clothes driers, water heaters, and other low-output appliances. . . .

Already marketed and meeting with solid success are a number of modernization "packages" which bring older oil burners into the efficiency ranges of the most highly touted competitive equipment. In addition, recognition is finally coming to that forgotten appliance

—the oil burning hot water heater. This recent development in the appliance field has been brought about by the inability of conventional water heaters using other fuels to meet the needs of the modern family for adequate hot water. The "three-to-ten-times-faster" claim of the oil water heater people is being accepted by a growing clientele.

The resurgence of the custom home — as contrasted with the "project" home — is expected to bring owner-chosen heating specifications into serious consideration. Since many of the custom homes are built by increasingly more affluent owners, the slight cost differential in favor of competitive fuels will be more than offset by the traditional acceptance of oil fuels. This trend is expected to accelerate with the marketing of the new and more dramatic new burners and equipment.

New oil uses have begun to generate interest among home and commercial buyers. Most dramatic of these new applications is the "total energy" concept now successfully operating in two large school complexes: this concept provides the heating, cooling, electric generation and incineration from a single fuel source through the utilization of diesel engines and a complementary incinerator. Oil burning incinerators for homes have also found their way into the market, as have carbon dioxide producers for greenhouse heating, and oil powered heating and cooling units for both home and commercial application.

**are
you right
to specify
"oil heat"
?**

You are if you considered

SAFETY

Stored fuel oil will extinguish a lighted torch.
A leak is completely harmless. Safety is the prime reason fuel oil is used so frequently in schools, churches, and other public buildings.

You are if you considered

ECONOMY

A comparison of cost of equipment, installation, and operation will show oil a little higher than gas, and both a good deal less expensive than electricity. As a rule, the longer life of oil heating systems will tend to even out the initial advantage of gas.

You are if you considered

SUPPLY

The modern supply of fuel oil is an automatic "keep fill" system. There is no dependence upon the capacity limitations of pipes or cables. There are no stoppages due to line failures. Intense competition has made service excellent and most complete.

You are if you considered

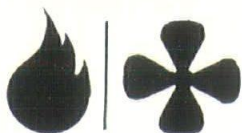
EQUIPMENT

Advancements made within the last few years have given oil heating equipment a new look — a new efficiency. Developments like ultrasonic atomization and controlled vaporization have been made practical. Oil heat has been made "white glove" clean, every inch automatic, continuously trouble-free.
**TODAY, FULL ADVANTAGE IS TAKEN OF THE INHERENT
SUPERIORITY OF OIL AS A LOW-COST FUEL.**

FUEL OIL DEALERS OF WISCONSIN

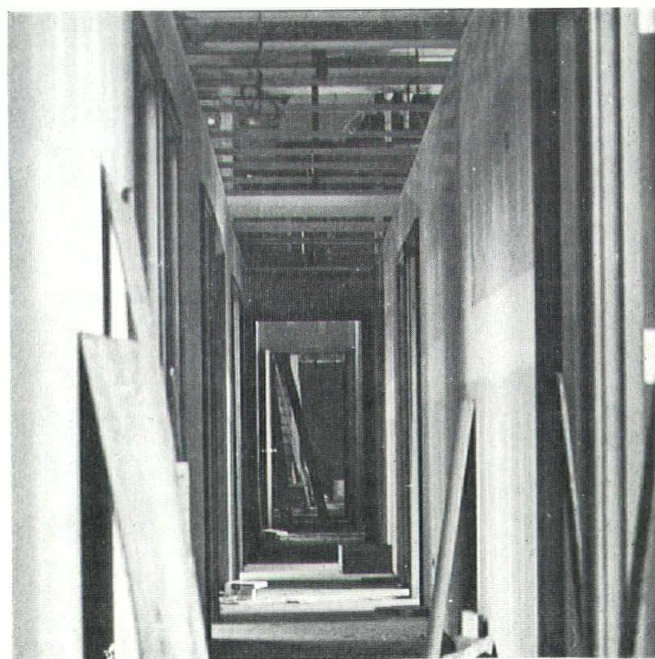
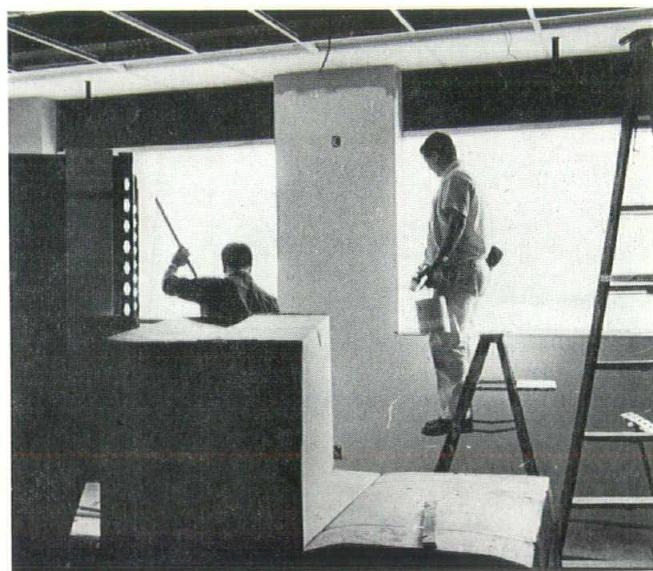
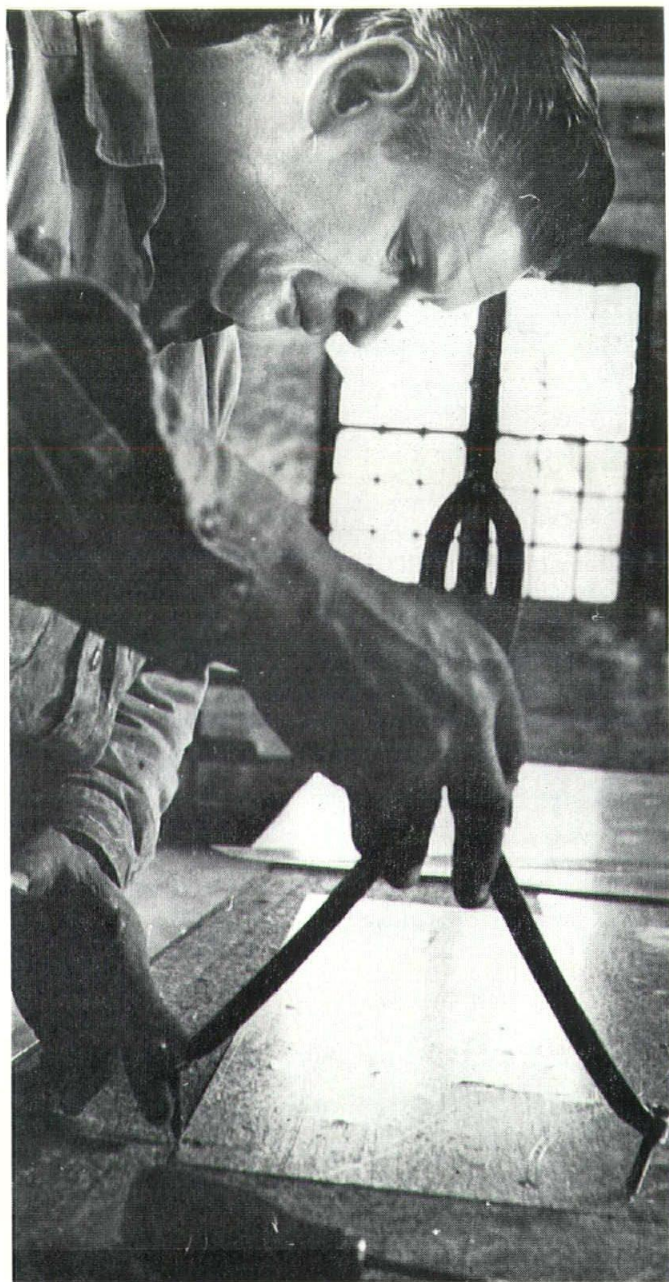
Send for information on successful techniques in modern use of fuel oil.
Contact Wisconsin Petroleum Association, 318 Tenney Bldg., 110 E. Main St., Madison, Wis. 53703

**are
you right
not to specify
"oil heat"
?**



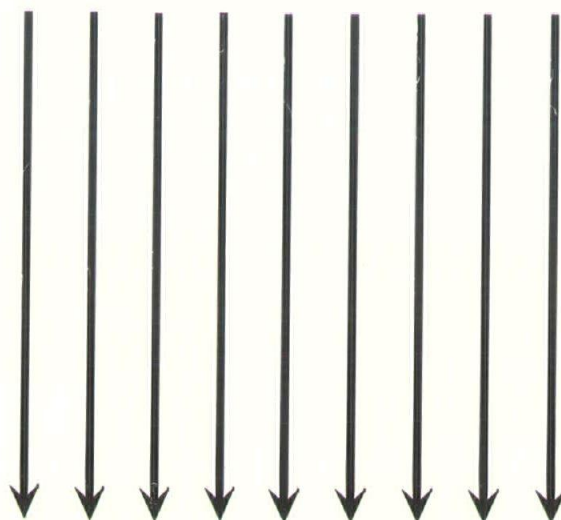
Year 'round conditioning section

We at Downey Heating are moving into bigger headquarters at 2203 W. Michigan in order to be able to serve you better.



We are doubling our shop space to 34,000 square feet. At the deadline date speedy preparations were under way for our move at the end of the year.

Downey Heating Company



has moved to:

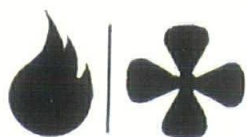
2203 West Michigan St., Milwaukee, Wisconsin

Projects done by Downey Heating Company:

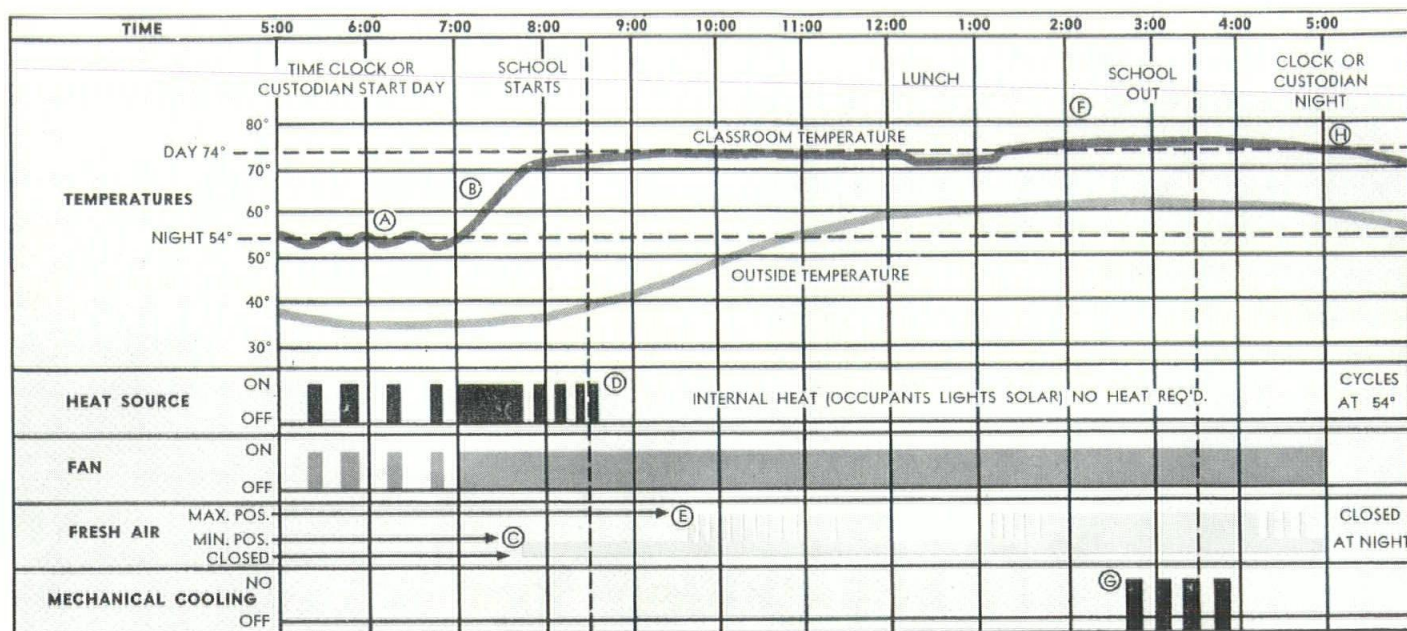
Cutler Hammer, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
St. Joseph's Hospital, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
Veteran's Administration Hospital, Wood, Wisconsin	Heating
Marine Plaza, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
Cardinal Stritch College, Glendale, Wisconsin	Heating, Ventilating and Air Conditioning
Children's Court Center, Wauwatosa, Wisconsin	Heating, Ventilating and Air Conditioning
University of Wisconsin Madison, Law School Bldg.	Heating, Ventilating and Air Conditioning
University of Wisconsin Madison, Social Studies	Heating, Ventilating and Air Conditioning
Universal Foods Corporation, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
School Administration Building, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
Northwestern National Ins. Co., Milwaukee, Wisconsin	Ventilation
Doctor's Hospital, Milwaukee, Wisconsin	Sprinkler
Hilton Inn, Milwaukee, Wisconsin	Sprinkler
Greek Orthodox Church, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
Mayfair Shopping Center, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
University of Wisconsin, Zoology Building, Madison, Wisconsin	Heating, Ventilating and Air Conditioning
Briggs & Stratton Plant, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
AC Spark Plug, Milwaukee, Wisconsin	Ventilating
Capitol Court Shopping Center, Milwaukee, Wisconsin	Heating, Ventilating and Air Conditioning
YMCA of Milwaukee — Racine and Beaver Dam	Heating, Ventilating and Air Conditioning

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AIR CONDITIONING AND HEATING • POWER PLANTS AND SHEET METAL WORK



Year 'round conditioning section



NEW CONCEPT OF HEATING AND VENTILATING CLASSROOMS 'COMFORT CURTAIN'

Mark F. Pfaller Associates, architects of Our Lady of Sorrows Elementary School in Milwaukee, used the two-classroom heating "Comfort Curtain" system, developed by Lennox Industries.

Essentially a two-classroom application consists of a heater room between two classrooms of a school, using one heater of sufficient capacity to supply both rooms. Simplicity of installation makes this application especially suited to single story schools. Also, it permits simple and economical future expansion of the school, in which two classrooms at a time can be added without the additional cost of enlarging a complete heating system.

Lennox Industries built a "living laboratory" — a two classroom school in Des Moines, Iowa — for their extensive research in the development and perfecting of this ideal method of ventilating, heating and cooling of classrooms. In this "living laboratory" research and testing are carried on continuously, both with and without students present.

The Comfort Curtain system uses warm air, steam, hot water, electricity or heat pump as economical heat sources. Literally, it is a curtain of properly conditioned air placed along the entire length of the classroom exterior wall — including the glass surface. This system eliminates cold downdraft and infiltration from windows and walls, sets all air in the room into gentle motion — mixing, filtering and blending it with fresh outdoor air — and heats or cools as it is needed. Lennox Comfort Curtain system provides both excellent perimeter distribution and continuous air circula-

tion with resulting even temperatures throughout the room. The Comfort Curtain system prevents room overheating due to occupants, lighting and solar radiation. In most localities outdoor air brought into the classroom by this system is cold enough to take care of cooling need during the school year. In areas where extra cooling is needed, this system is designed to accommodate air conditioning coils, or a Comfort Curtain system using chilled water can be specified. With a heat pump you automatically get air conditioning. This system supplies fresh outdoor air continuously during the hours a classroom is occupied. It blends air in the classroom with tempered outdoor air to absorb the excess moisture generated by the occupants of the room.

This prevents condensation on cold windows and walls. A very sensitive thermostat controls the amount of heating or cooling necessary to meet changing thermal conditions. No matter how these change, an unvarying comfort level is automatically maintained in each room. Due to the large amount of air being distributed along the full length of each room, circulation is rapid, complete — immediately meeting the changing requirements.

The Lennox Comfort Curtain two-classroom system also permits individual use of each classroom — after hours or during week ends and holidays — with ease and economy. There is no need to heat and ventilate the entire building, or even a section of it. Comfort is automatically provided for the room or rooms being used, wherever they are located in the building.



A refreshing new approach to school heating, ventilating and air conditioning

What's up? Plenty! A way to better thermal environment . . . the new Lennox Direct Multizone System (DMS).

One DMS unit, usually roof-mounted, can handle up to 12 different zones simultaneously! Each zone is heated or cooled as needed — independently of the others. Flexible ducts permit rezoning at any time. Makes full use of outdoor air for free cooling, positive ventilation.

Lennox DMS was selected for the School Construction System Development (SCSD) by the Educational Facilities Laboratories. You'll find it great for your schools and many other buildings. For more information, call:

LADY OF SORROWS SCHOOL uses **LENNOX** equipment

Students of this fine new Milwaukee school will enjoy Lennox comfort. Here the Lennox COMFORT CURTAIN® system is utilized. It is available for gas, oil or electric fuel and for warm air, hot water or steam. COMFORT CURTAIN air distribution may also be used with Direct Multizone units described at left.

In Milwaukee: Carl Enerson, 873-2510

In Madison: R. A. Houden, 233-7833

In Green Bay: R. G. Kinnaird, 494-2782

In Hudson: B. W. Wahlberg, 386-2179

LENNOX Industries Inc. MARSHALLTOWN, IOWA

NEW LOW RATE*

makes it more economical
than ever for you to

HEAT and COOL with GAS



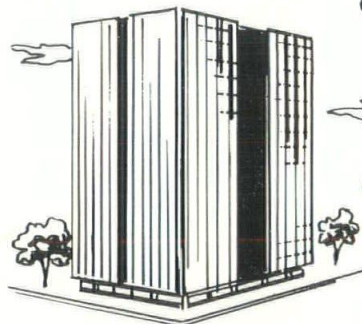
PLANTS



SCHOOLS



CHURCHES



APARTMENTS

Whether you are in an existing building, or constructing a new building, large or small, if you qualify for our new low rate*, you can enjoy the many advantages of natural gas at a tremendous saving. With natural gas, your heating and cooling will be completely automatic. Never any delivery or storage problems. And gas is cleaner, too... with higher efficiency and lower maintenance. It will pay you to investigate *now!*

*New low GS-4 rate requires your heating or cooling equipment to be able to operate on standby equipment.

FOR INFORMATION, see us or write us
...or phone 276-6720, Extension 550.



MILWAUKEE GAS LIGHT COMPANY
626 E. Wisconsin Ave., Milwaukee, Wis. 53202